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Washington Bus Legislation May Establish Guiding Precedent for Other Cities

Public Opinion No Longer Dormant in Capitol. The Public Ceases to be the Matter-of-fact "Bystander" Just as Soon as It Discovers That It is Being Imposed Upon

Mold Public Sentiment by Education. Call Its Attention to Bus Utility

By LEE LAMAR ROBINSON

WASHINGTON, both political and civic, is becoming agitated over the motor bus. While the District of Columbia Commissioners, the membership of which make up the Public Utilities Commission, have before them the question of the extension of franchises for bus lines already operating, and the authorization of new routes, Congress has before it, legislation under which the question of a tax on such lines would be fixed.

Due to the fact that the growth of the motor bus in popularity has been so gradual that the public, accustomed to taking things for granted, has not realized the extent to which it is daily becoming more and more dependent upon the new service, it has taken a development in Congress or a petition for a new franchise to rouse the people to their interest in it. But, with these developments at hand, those who depend upon local utilities for transportation are sitting up and taking notice.

Rapid Bus Growth Universal

The history, briefly, of motor bus transportation on a somewhat ambitious scale in the National Capital, is interesting in itself, as well as typifying to an extent the probable experiences of similar lines in other cities. In March, 1921, the Washington Rapid Transit Company began operation with a few machines on Sixteenth street. It succeeded so well that gradually the service was extended to other thoroughfares, although possibly with an accompaniment of the natural vicissitudes of a new venture. In all, 27 companies are now operating in Washington, local and interurban, with a total of 106 buses.

On July 1, 1922, this company was operating 34 buses, and the Washington Railway & Electric Company, three. The latter company, through its president, is on record as advising the Public Utility Commission very frankly that extensions of the routes over which the Rapid Transit Company may operate doubtless would seriously affect the income of the electric line. That this is not pleasing to the street car company may be taken for granted.

Public to be Served

What action will be taken by the Commission with respect to extensions of the routes over which the bus company would operate is as yet a question, although the attitude of the Commission in this connection has been to seek to give first consideration to the proper needs of the public from a local transportation standpoint. At present, prospective operators of motor buses for transportation purposes have only to get a license from the Police Department, as in the case of any other motor vehicle, this license being good for one year but the question as to where the cars shall run, and the frequency of the trips, together with the charges for travel, must first be submitted to the utilities commission, and approved by that body.

For several years motor bus lines have operated successfully into southern Maryland, many enterprising towns being reached which are either without rail transportation facilities entirely or without a satisfactory service of this character. At present there are a number of such interurban bus lines out of Washington. Recently, one line operating between Virginia points and Washington voluntarily quit because the business secured did not justify continuing the same.

Another line which carried sightseers to different nearby parks in the District of Columbia has quit business. These two companies, however, operated but two buses each. The moral seems to be, therefore, that after a period extending from a year to several years and covering the operation of both urban and interurban bus lines, the experience has justified from a financial standpoint the introduction of this new service. The view of the man on the street seems to be that it will continue to grow.

As Washington is not unlike other cities of equal or greater population, except possibly in the fact it is not a factory city, success in the operation of motor buses commercially in it would seem to argue that a like success could be attained elsewhere, the conditions being fairly similar.

Just as the Fifth Avenue bus lines constitute probably New York's most popular attraction with visitors to the metropolis, so do the sightseeing lines in Washington, always a mecca for tourists the year around, seem to have a decided claim upon popular favor. But, aside from the recreation viewpoint alone, with which the bus fits in so well, the impressive feature in connection with its appearance is its utilitarianism.

Remove Buses and Watch Result

A test of the place which the motor bus holds in the esteem of the public in cities where they have been given a thorough tryout doubtless would be the withdrawal suddenly of the cars from service. If the situation in Washington is to be taken as a criterion, the chances are an insistent demand would at once go up for the restoration of the service.

Washington first viewed the commercial motor bus, operating as does a street car line, as a novelty, and evinced only a

passing interest in it. Gradually, however, it grew in favor principally because of its mobility. On it, points could be reached which before had been available only on foot or by private machine or carriage. The National Capital is in fact a city of magnificent distances, and this fact gave the bus its real opportunity.

Complaints as to the service, by those who continue to use it, are, of course, heard, just as complaints always have and doubtless always will be heard of service by public utilities, these having to do with the cramped quarters provided, Whether, from a standpoint of financial expenditure, and the building of a car which would be roomier and also safe for travel, it will be possible to meet the complaint as to cramped quarters, is a question doubtless for the future to answer, but it certainly is one which would interest the patrons of bus lines.

An Interesting Controversy

The Public Utilities Commission of the District of Columbia has taken the stand that it will not grant franchises to motor bus lines which would parallel existing street car lines. In this connection an interesting controversy arose when the Rapid Transit Company sought a franchise by way of Union Station. The street railway company objected on the charge this would come under the ban as a parallel to its lines. The Commission held otherwise, however, on the grounds the bus company would operate a cross town line, and that this was a public need. Additional clashes of this character are expected, but in view of the conservative attitude of the Utilities Commission a just and fair decision is anticipated in each instance.

The Commission has found it impracticable to require a monthly accounting from motor bus lines on each car operated, but it does require a monthly statement of receipts of the individual companies, as a whole. These reports are very interesting and reflect the development of the companies. From the financial statements furnished other conclusions as to the success or non-success of the innovation may easily be drawn.

Under a bill recently introduced by Senator L. Heisler Ball, of Delaware, chairman of the District of Columbia Committee of the Senate, a tax of 4 per cent on the gross receipts of motor bus corporations would be fixed. This measure has not yet been acted upon in committee. This bill reads as follows:

"That hereafter each motor bus company, transportation company (other than street railway companies), or corporation, firm, or individual operating vehicles for hire on prescribed routes in the District of Columbia, within the jurisdiction of the Public Utilities Commission of said District, shall pay, in addition to other taxes required by law, a tax at the rate of 4 per centum per annum on its gross receipts for business done within the District of Columbia.

"That each such motor bus company, transportation company, or corporation (through its president or cashier), and each firm or individual operating vehicles for hire on prescribed routes in the District of Columbia shall make a return under oath to the collector of taxes of said District on or before the 15th day of each calendar month of its gross receipts for the preceding calendar month. The said collector of taxes shall render monthly to the motor bus companies, transportation companies, or corporations, firms, or individuals operating vehicles for hire on prescribed routes in the District of Columbia bills for the taxes herein provided for, based upon the returns from said companies, corporations, firms, or individuals hereinbefore referred to, and these bills shall be due and payable by said motor bus companies, corporations, firms, or individuals on or before the fifteenth day after rendition of said bills.

After prescribing where the taxes in question shall be paid, and how deposited, the measure continued:

"That failure on the part of any motor bus company, transportation company, or corporation, through its president or cashier, or the failure of any firm or individual, to make the return under oath herein provided for within the time prescribed, or the making of any false affidavit in relation thereto, or the failure to pay taxes based on said returns when due, shall be deemed sufficient for the revocation by the Public Utilities Commission of the District of Columbia of the license of such motor bus company, transportation company, corporation, firm, or individual to operate vehicles for hire in the District of Columbia.

"That the District of Columbia shall be entitled to all the remedies provided for in this Act or in existing law, as well as to all common law and equitable remedies to insure the collection of the taxes provided for in this Act."

Due to the fact that legislation of whatever character applying to the District of Columbia, a federal territory, is so generally regarded as establishing a precedent for states and cities to follow, as to legislation of a similar character, the action by Congress upon the measure of Senator Ball doubtless will be watched with interest.

"Two Million Vehicles for 1922," Says N. A. C. C.

ADDITIONAL proof of the nation's increasing need for motor transportation for both passengers and merchandise, is supplied by the record-breaking figures, given out by Alfred Reeves, general manager, National Automobile Chamber of Commerce, after a visit among the plants in the central west, which shows that in June the motor industry produced in excess of 288,000 motor vehicles, which is 12 per cent greater than the previous record of 256,000 in May. This indicates a production for 1922 of more than 2,000,000 motor vehicles.

During the second quarter of 1922 the entire industry produced 763,000 motor vehicles with 1,137,000 cars and trucks for the full six months.

"Reports received from 20 different sections of the country indicate the usual seasonal decrease," says Mr. Reeves, "which was expected a month ago. The slowing down for the next six months will be much less than usual, however, and year's production will exceed 2,000,000 motor vehicles, as against 1,668,000 for 1921 and 2,205,197 the record figures of 1920.

Improving General Business Creating Truck Demand

"While the passenger car end of the business supplied the biggest part of this increase, there has been a steady increase in the number of trucks made and sold, particularly those of the lighter type. The truck business depends on the improvement of general business and its need for increased transportation facilities.

"There is a broadening field for motor buses. In some cases they are being taken on as feeders for electric lines, while the enterprising railroad officials are now taking the truck as an ally of the main lines, with particular reference to short haul business and store-door delivery," continues Mr. Reeves.

Lower Cost to Consumer Helped Return of Business

"In January, students of the industry predicted a substantial year for the motor car industry, based not alone on the need for motor cars that had not been satisfied last year, coupled with the fact that thousands of the ten million in use would wear out, but primarily because the automobile manufacturer promptly took his inventory losses and priced his cars on a basis comparable with the buying power of the public. They advertised the reductions to the public and made their arrangements with the dealer and middlemen, so that the lower prices were passed on to the final consumer.

"There have not been the usual cancellations which generally follow after July 4th, largely because a substantial number of orders on hand are for closed cars, which will continue to be in heavy demand for the remainder of the year. Varying with the locality, from 25 to 50 per cent of total sales made during past three months were for the enclosed types of bodies.

Exports Three Times as Large as Last Year

"Coupled with the record-breaking production in June of 288,000 vehicles which was 61 per cent over June, 1921, there came an increasing demand from abroad. The Government figures for May show that 6,798 cars were exported, or 6 per cent over April. The motor truck exports were 1,203, or 36 per cent better than April. Total motor exports were more than three times of May, 1921. These cars and trucks were shipped to 60 or 70 different countries and indicate a revival of interest in motor transportation in those sections.

"On July 1, there were more than 10,500,000 motor vehicles registered in the United States."

Great Britain Has Larger Ratio of Trucks Than United States

The Miller Rubber Co., has found that the ratio of trucks to all cars in Great Britain is 26 per cent, while that in the United States amounts to only 13½ per cent. Great Britain has a total registration of 497,582 and a truck registration of 128,200,while the United has a total registration of 10,448,632 and a truck registration of 1,127,482.

Why Substitution in Merchandising Oil Does Not Pay

This Article Gives Reasons Why the Oil Retailer Should Handle Only Good Oil; Most Untimely Motor Overhaul Jobs Are the Result of Using Poor Lubricants

LUBRICATION plays a very important part in the life of the motor truck and the internal combustion engine. Many records are available which conclusively prove that the vehicle which is properly lubricated will give twice the service than the one on which this important factor is habitually neglected, or where the wrong lubricant is employed.

The importance of lubration in the truck field does not seem to be taken as seriously as it has been in the passenger car end; that is, from the owner's viewpoint and also from the dispenser's viewpoint, as this article will point out.

In comparing the owner's viewpoint, we find that the passenger car owner is far more sold on the advantages of buying a good grade of lubricating oil for his car than the truck owner. The passenger car owner takes pride in a sweet running motor; he instinctively knows that a poor grade of oil will cause all kinds of motor ills, especially after he has been forced to pay a big repair bill.

It must not be surmised from this that every truck owner is careless in the matter of lubricating his truck. But as a general rule, truck lubrication is not given as careful attention in respect to the kind of oil used as it should be. The owner of a single truck, garaging in the public garage, will in most instances take the oil recommended by the garageman. On the other hand the owner who garages on his own premises will perhaps buy oil in drums, because he can buy it cheaper in quantity than at so much per quart from the garage. This owner buys a good brand, one recommended by the factory or the dealer.

Then we have the fleet owner who usually buys nothing but the best grade of oil and in sufficient quantity to call for direct purchase from the oil manufacturer. The price quoted depends entirely upon the quantity purchased.

Just a "Quart of Oil"

Let us also consider the truck owner who buys either from the public gas station or his garage or from some oil manufacturer. This owner is not interested in quality—he wants a cheap oil. In other words, this owner doesn't care what kind of oil he is getting—the main thing he is interested in is the price. This owner doesn't ask for a standard brand, he simply asks for "a quart of oil."

Take Away the "Boomerang"

It is this owner whom the oil companies are trying to interest in the subject of better lubrication. This owner spends more money on repairs than the owner who buys good lubricating oil. And it is this owner who is the first one to set up a howl to the garageman who sold him the cheap or inferior oil, when the dealer or repairman convinces him that the repair job was simply the result of using poor lubricant.

A Case of Killing the Goose That Laid the Golden Egg

The Old Oil User

And while we are classifying the different types of oil buyers, let us not forget the owner who likes to save oil, by never thinking of draining out the crankcase. He simply keeps on filling up the crankcase to the required level and lets it go at that.

From the foregoing it will be realized, no doubt, that there is still a great deal of education needed on the part of the majority of truck owners in respect to lubrication. Practically every instruction book contains information of some kind or other as to the places where oil or grease should be applied at certain intervals. Oil companies have published elaborate charts showing the particular body of oil best suited for the various motors used in commercial and passenger cars. Oil is being supplied in sealed cans and in bulk by the prominent oil companies, to insure the user that he will get what he asks for. Much literature has been broadcasted for the purpose of educating the owner that he should use a good lubricant and lots of it. But with all this helpful propaganda on the part of the oil manufacturers, the great majority of motor vehicle owners are buying oil on a haphazard basis.

The question naturally arises: "Who's fault is it?"

Our observations indicate that much more attention would be paid to proper lubrication and the use of good oil, if the oil retailer would educate his customers.

The oil dealer may be the garageman; accessory and supply store or the general store in the smaller town, etc. He buys his oil at a certain discount and is supposed to sell it at a certain retail price. The oil manufacturer cannot prevent him from cutting the price. He can refuse to sell him in the future—which he does occasionally. The oil dealer may handle a few brands or he may only handle one.

He realizes perhaps that the profit he is making on oil sales is not as remunerative as he anticipated. Down the street another garage or supply house is selling the same brand. But a few cents cheaper. The outcome may be that number two decides that the only way to beat that competition is to cut his price. The result is both of the oil retailers are losing money—of course, there can't be profit in selling oil under such conditions.

But this isn't the most serious condition with which the oil manufacturer has to contend. The worst of all is SUBSTITUTION.

They Pay in the End

So many oil dealers think that if they can sell the owner something inferior—cheat him openly in many cases—that they can get away with it and make greater profits. They may for a while,

but the owner eventually finds out that his motor is not running as it should. He has more carbon trouble than formerly—a bearing burns out—but the owner doesn't put the blame on the man he bought the oil from. In good faith, he bought a standard brand of oil from the garageman, he saw the trade mark on the tank, he has heard that this oil was honest-to-goodness oil, the company that refines it has a big reputation. But he didn't know that the garageman was substituting.

Concerning Cheap Oil and the Gyp

But the more Mr. Owner thinks of it the more he begins to get skeptical about this oil dope. Along comes a friend who gives him an earful to the effect that he is foolish to buy this high priced oil. "You go to so-and-so," remarks said friend, "he sells an oil which is just as good as the brand you were buying, and it costs only a little more than half as much as you were paying."

Mr. Owner, perhaps gets the "cheap oil" bug. He gets into the frame of mind that any old oil will lubricate his motor, so long as it looks like oil. The final answer is that the owner is forced to pay repair bills which could have been avoided; the garageman has lost another customer, because he substituted; the oil man's reputation has received another nick in it, and the gyp or cheap oil man is making more profit. All of which could have been avoided had not the garageman resorted to crookedness.

Every one of the big oil companies is deploring the substitution evil. It is nothing new to them to have garages buy prominent brands of oil in trade marked containers, and then Mr. Garageman refills or mixes part of the good oil with some residue, commonly termed "slush" and sells it for the branded article. The bootleggers have nothing on some of the garagemen and oil dealers in regard to mixing.

It is because of this substitution evil that the oil companies put up their product in one and five-gallon cans, so that the owner cannot be cheated. But every oil dealer knows that he can make more profit by purchasing in bulk instead of cans, particularly to truck owners. The oil dealer also knows that the greater quantity he buys the greater discount he will get, and consequently the more profit he will make.

Oil Isn't an Accommodation

The trouble with many garages is that they do not make any attempt to **sell oil.** They simply handle it. They take it as a matter of course that they must handle oil to accommodate the customer who calls for gas. And they claim that the profit isn't great enough to make it a paying proposition. They can't make enough out of the branded article so they start adulteration on a wholesale scale. And then they figure on the greater profits which they are realizing, temporarily **but they generally fail to consider the profits they are losing by not selling a high-grade product at its legitimate price.**

Why is it that so many garages haven't got the confidence of the truck owners in their vicinity? Simply because the garageman does not take any interest in the owner's vehicle outside of supplying him with fuel, oil and such accessories the owner may ask for.

Wouldn't it pay the garageman to conduct a lubrication service at so much per month or year or on a mileage basis? It's being done, of course, but there is still plenty of room for the enterprising and honest garageman to enter this field and make a specialty of a truck lubrication service. A slight charge for this service plus the profits on a good grade of oil and grease, would help materially to decrease the overhead on many garages. Some say that "it cannot be done because the customer would feel that the garageman was trying to put something over on him." In some cases that's true. But if the garageman will handle this diplomatically and play square with his customer, it will not be difficult for him to make this a paying proposition.

Large Profit in Oil

It is said that the man who sells a truck owner his oil consumption for a year should make at least as much profit out of the service as the man who sells him tires for a year. This is due to the fact that the profit on oil is so much larger than the profit on tires.

The value of proper lubrication and the use of good oil, is fully realized by the large fleet owners. It may surprise some oil dealers to know that the largest bus concern in this country, uses only high-grade oil, as its records over many years have proven that the better the oil the greater the economy.

A prominent haulage concern, operating between Philadelphia and New York drains the crankcase after every round trip, and a high grade of oil is used. This company states that it is cheaper to use plenty of fresh oil than have the trucks laid up on the road, on account of engine trouble.

Other large users drain the oil every week irrespective of the mileage the trucks have made. This automatically eliminates forgetfulness on the part of the service department to drain the crankcase at a stated mileage period.

If the average garageman and oil dealer would fully realize the importance of proper lubrication in relation to the econ- of operation of a motor truck, he would push the sale of high-grade lubricants, and stop meddling with poor lubricants and cut out substituting.

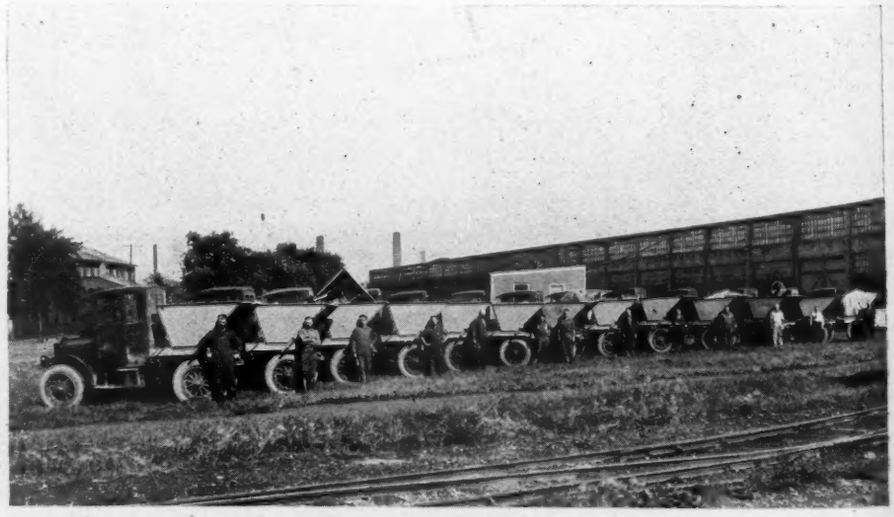
Any well-informed mechanic will confirm the statement that 50 per cent of the motor repairs made today are due to the use of inferior oils. This being the case, wouldn't it pay the oil dealer to show the customer the advantages of using high-grade oil, in preference to paying for a big repair bill. A little figuring would easily convince the customer that the few cents additional per quart for a good grade of oil is money well spent.

The fact of the matter is that the cheap oil is nothing but the by-product of the higher-grade oil and as such has very little if any lubricating value.

New Factory for Firestone Steel Products

The original home of the Firestone Tire & Rubber Co., on Miller and Sweiter Aves., Akron, O., at present occupied by the Firestone Steel Products Co., the rim division of the company, is soon to be offered for sale. The plant built in 1904 at that time, thought adequate to house the offices and factory of the company for many years, has become too small to house even the rim section of the business and a new unit has been erected on a site south of Plant 2 of the Firestone Company.

The new building which is a single-story structure brick and steel, along with a two-story office building, affords the new steel plant about five acres of floor space. The production capacity of the plant is set at 20,000 rims and 4000 solid truck tire bases daily.



Judging From the Above Illustration, the Road-Building Program Continues as Strong as Ever and Without Interruption

The illustration shows a recent installation of Dual Gravity Bodies, made by the Heil Co., Milwaukee, Wis., for the Commercial Trucking Co., of Detroit. As the trucking company was very anxious to get its units in a hurry and as its contracts for road work secured were in Wisconsin, the trucks were driven to Milwaukee for the installation of the bodies. The trucks, which are of the tractor type, are one and a half tons capacity, Selden make, 105 in. wheelbase and carry two one-yard gravity bodies.

Why Not?

This Tale is Written for the Dealer Who is Not Alive to the Opportunities in His Own Home Town

By MARTIN J. KOITZSCH

A M. ARMSTRONG, a dealer for the past few years for a reputable commercial car in the city of Spodunk, a thriving little industrial center of some twenty-five thousand population, was nestled behind his desk in a far away corner of his salesroom, thumbing over a list of prospects trying to conjure up some formula for drumming up new business. The more he thought of the matter the more he realized that there was only one formula—work.

Thus, his mental frame of mind wasn't running in pleasant channels, when Bob Slight, Sales Promoter of the Well Known truck, stepped into his office.

"What's the idea, did your mother-in-law come home to roost?" asked Bob, by the way of a greeting.

"H—— no," growled the dealer without looking up at his jocular caller. Then as he glanced up, a slight flicker of hope brightened his eyes somewhat as he recognized the owner of the voice and he responded a little more warmly.

"Why Hallo Bob. Didn't recognize you. Haven't seen you in a dog's age. Glad to see you, here, sit down," drawing a chair over. "Yes, if you were up against the proposition I've been fondling for the last few months you wouldn't feel so enthusiastic either."

"Come out of it old man, it surely can't be as bad as that, you're still in business. Furthermore, your trouble doesn't differ in the slightest from the troubles of many others throughout the country. The real difficulty is you can get reconciled to the fact that business today isn't the same effortless proposition of yesterday. More concentrated sales effort in merchandising and following-up is required."

"I know that, and as I have shown you on your last business trip those are the very tactics that enabled me to continue in business as long as I have, but—"

"Yes, but," interrupted Bob Slight, "this process isn't fast enough for you. I know what you're trying to drive at. Ye gods! man, you can't expect to pass through the deflation period over night,—bid your time, follow your present tactics, ring in a new idea occasionally and you're bound to come out right eventually."

A Man of Observation, Not Regrets

Armstrong was acquainted with the snappy optimistic note of Bob Slight's talk from the past. Experience has proved him to be a man of sound common-sense. In fact every time they parted company Bob left him rejuvenated with the working pattern of a new idea. Naturally Bob Slight appeared nothing short of an encylopedia of ideas in the eyes of Armstrong. The impression wasn't ill-founded as Bob's next comment proved.

"Say, Armstrong, my little run from the station to your place and our conversation just gave me a germ of an idea that might develop into an inspiration. Do you want to hear it?"

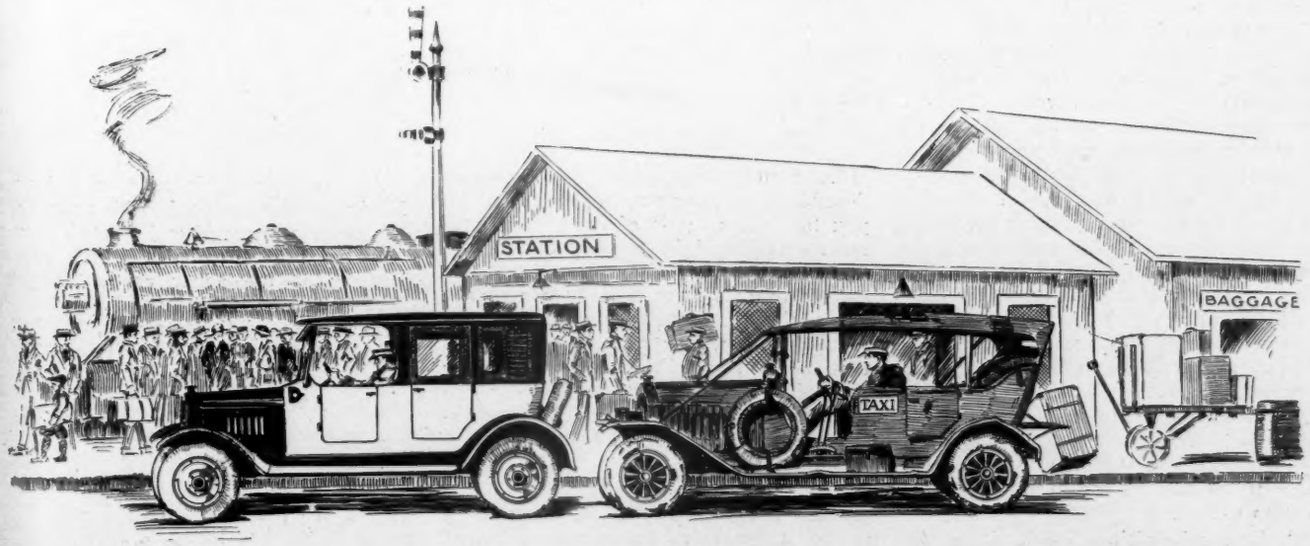
"Shoot—let it ride," responded Armstrong, striking a posture alertly attentive. "What's it all about?"

"Taxicabs, did you—"

"Taxicabs. Taxicabs, in what connection. This town—," began the disappointed Armstrong only to be interrupted.

"Now wait a minute, hold your horses and I'll explain. First of all let me relate to you my morning's experience, and the resulting dissatisfaction and poor impression I received of your city when I alighted from the train, just before running up here. I stepped from the train and meandered through the congestion of the station to the street with the intention of making a quick get-away to your establishment in some modern vehicle of conveyance. Imagine my disappointment and disgust upon surveying two of three rickity old coaches as if resurrected from the pioneer days, and a couple of jitneys that looked as if they were ready to fall apart and drop their passengers in the middle of the street. What was I to do? I had to decide on one of them and put up with either the time consuming inconvenience of the stage coach, get rattled to pieces in the jitney, or walk. As I see it there's a real need in this town for a genuine taxi service and the man on the job is going to make quite a little sock out of it."

"Yes, I suppose our city's big enough to accommodate a few taxis," conceded Armstrong, "but it's out of my line. My business is to sell trucks and I got all I



Which Would You Take?

can do to take care of that satisfactorily without engaging in a new enterprise."

Armstrong didn't wax very enthusiastic about the idea. In the first place he figured that the profits, if any, would be too small to warrant the investment and in the second place there was no guiding precedent to follow. He wasn't much of an entrepreneur.

Taxi Service is Kindred in Important Respects

"Now listen to me," was the impatient reply this doubting expressing received from Bob Slight, whose enthusiasm grew with increasing force as question after question of the problem arose in his active mind only to be promptly settled and temporarily put aside. "Do you mean to sit there and tell me that if an opportunity presented itself and you recognized it you'd refuse to accept it. No.—I'd wager my life that you wouldn't. The trouble with you is that you fail to recognize its business possibilities—to recognize it as an opportunity.

"Let me show you how, contrary to what you say, this taxi service is closely allied to your business. You have a service department. It can attend to all repairs at cost, and it can put your cabs on the stand for a complete greasing every 13 or 14 days in addition to a minute underbody inspection for loose bolts or worn parts. Your cabs, supposing that you start with two, can be kept in constant operation until some trouble develops which can then be rapidly remedied in your shop and immediately put on the street again. Man, your only problem will be to find two capable and faithful drivers, who being employed under a profit-sharing system, will be urged to exercise extreme courtesy and consideration in their relations with the patrons of your service. What do you think about this scheme now?"

How Will I Get Business?

"Sounds reasonable," replied Armstrong, still rather non-committal but a little more warmly. "But the patronage, how will I establish it and when established how will I take care of it. And then there's a lot of other details such as a satisfactory profit-sharing basis, amount of tariff chargeable, accounting and checking up the driver. Throw a little light on these points and perhaps I'll be able to appreciate your idea."

"Fine! You're evidently beginning to give the matter a little thought. First of all let us go into the matter of establishing the patronage," and with this introduction Bob shifted himself into a more comfortable position and started to unwind his idea with astounding acumen and comprehension of the subject. He showed a convincing grasp of all the important details.

Armstrong began to show signs of life and conscientiously set himself to give his entire attention to the facts as they were about to be laid before him. He knew what to expect.

"A little advertising, emphasizing the efficiency, safety, cleanliness and reasonableness of charge at the start will quickly acquaint the public of your new and modern service. Later, actual performance, which will be in conformity with your advertising, will develop public confidence in your service. Next establish two stands at centers of greatest activity. After these places are chosen remain there and the public will gradually learn to rely on them, knowing that taxi service is being rendered from these points. In addition, have a telephonic nerve center in your office available to drivers and public alike. The advantage of this lies in business calls and constant driver contact. This is especially valuable after a long fare to the outskirts has been made. Upon discharging his passenger the driver communicates with you to find out if there is any business hanging fire in the vicinity."

"Well what would you consider an equitable profit sharing basis?" was the next question that confronted the staunch Bob. He had apparently sold Armstrong on the patronage point.

Profit Sharing Creates Personal Driver Interest

"Right, we'll go into that next. Actual figures and working percentages you must work out for yourself. This also applies to tariff rates, as no two communities or two organizations are synonymous. You must determine through experience just what rates to charge and just what your profits will be. As a basis for your calculations I might mention the basis under which some of the larger taxi companies in the big towns operate their systems.

"One company pays its drivers 19 per cent of all business given them through their offices, 21 per cent on all pick-up business they obtain, and 50 per cent on each additional passenger per trip. You see extra passengers are carried at a certain fixed rate regardless of the mileage. Besides, to act as a deterrent against useless 'rolling' you might require the driver to pay one half of the cost of the gasoline. In the event of an accident the driver's share in the profits may be discontinued until the cost of repairs has been covered. In addition to these there may be a few other points that a short period of operation will bring forward that might be worthy of consideration.

Facts on Tariff Regulation

"As for tariff rates, that will be entirely dependent on your cost of operation. If you take for a basis of computation the rates established in the big cities, such as 45 cents for the first mile and 30 cents for subsequent ones, and 20 cents each for additional passengers, you can rest assured that if you run your cabs systematically you will be well over your cost of operation. But, as I said, these are figures which you yourself must arrive at through studious investigation.

"Now your only remaining question is the accounting system and checking. It is really needless to detail the functioning of such a system, as the methods followed are conventional accounting methods, whereby the taxi meter slips are checked against the drivers' cars, and against the in and out record of the garage."

Armstrong seated back in his chair slapped his friend's thigh enthusiastically, indicating that he was finally in complete accord with his idea. He was sold.

Would Convert Passenger Car Into Makeshift Taxi

"Great! Fine! I believe it'll work, in fact I know it'll work. By gosh, I just felt that you wouldn't fail me—you haven't yet. You certainly have managed to obliterate every stumbling obstacle. I'll start in right away. I 'spect that in about two weeks after laying out regulations and arranging a working system, I'll start things humming in this burg of ours."

Bob Slight, as was his wont after launching one of his brilliant ideas, reticently smiled and waited for his now enthusiastic protege to continue.

"Besides, I'm in luck, just the other day I was offered two limousine chassis that I believe I can still get and convert into—"

"Hold on, just a minute," exploded Bob like the report of ignited dynamite, "that's just where you and I fail to agree. What do you want to do, kill the project before it's born? Well, that's just exactly what you contemplate doing."

"Why, wha—" faltered the astonished Armstrong.

"'Member my calling your attention to the type of service I found so objectionable upon leaving the station. Gee Wilikens, Man! and now you come forward and suggest providing the same thing. You got to render real service and there's only one way in which you can do it. Get in touch with a manufacturer putting out a real, honest-to-goodness taxicab. Your system's got to be real and different—that's all."

Convinced on Standard Taxi

"I suppose you're right as usual," acquiesced the now docile Armstrong, "although it sure is a powerful temptation. Alright, old boy, the idea is yours so we'll start right."

"That's the way to speak," rejoined Bob, rising to his feet. "I've got another call to make, after which I'll have the rest of the day to myself. Expect me 'bout five and we'll have dinner together."

"Right! the treat's on me."

After seeing his friend to the door A. M. Armstrong returned to his desk, pulled out paper and pencil and started to commune with himself, occasionally jabbing joyfully at the paper as he caught a thought.

The point of this story is, "Did Bob Slight's thought ever occur to you?"

A financial program whereby $1,000,000 of new capital will be obtained through the sale of securities has been announced by Gray & Davis, Inc. These funds are to be used to liquidate all current liabilities except a sum of $700,000.

Passion for Figures Helps Greatly in Selling Trucks and Tractors

By FRANK H. WILLIAMS

"I'VE got a rather odd method of employing new salesmen," said a very successful middle-western dealer in trucks and tractors. "Whenever I go about the task of employing a new salesman I ask him this question:

"'Have you got a passion for figures?'

"In most instances this question leaves the applicant blank. Some of them think I'm crazy with the heat or something like that. It is only rarely that I see a flame flare up in the eyes of the man to whom I direct the question, while he answers:

"'I get you! I sure have a passion for figures and its the best help I know of in selling trucks and tractors!'"

"When I have the rare pleasure of meeting that sort of a man I hire him on the spot, because I know he'll make good.

"But with the average applicant whose attitude indicates that he thinks I'm cukoo, I simply say:

"'Afraid I can't use you now,' and let it go at that.

"With the other class of applicants, though, who show that they consider me still sane in spite of my foolish question, I carefully explain the matter like this:

Down to Brass Tacks; That's All

"'When I ask you if you've got a passion for figures I'm trying to find out whether you rely on the gift of gab to sell trucks and tractors or whether you get down to brass tacks on the proposition and back up your selling talks with honest-to-goodness data which will show prospects just what others are doing with the trucks and tractors we sell, just what mileage to expect from the machines, just what work can be accomplished by the trucks and tractors and just how much money they can save in their operations by buying the trucks and tractors we sell.

"'This latter data,' I go on, 'showing the prospect in black and white just why the trucks and tractors we sell are superior to anything on the market is the most important data of all. The selling of commercial cars is no longer a matter of convincing the prospect of their utility. Practically all prospects are sold on the proposition of using commercial cars. Nowadays the selling of trucks and tractors lies largely in convincing the prospect that the commercial cars we are handling are the best adapted to his own particular line of business.

"'This means as you can plainly see, that we've got to do some figuring for each prospect. We've got to know what his business is, what his use of truck or tractor is. Just how many stops or starts per day he makes, just what sort of spaces he has to turn in and all that sort of thing. The more we know about the use to which he is going to put the machine we want to sell him, the better equipped we are for convincing him that the machines we are selling are the best adapted to his use.

Dollars and Cents Figures; Not Gab

"'In fact,' I continue, 'while some dealers think I'm a bug on the subject, I'm just about convinced that the best commercial salesman for me to employ is not a man who is a smooth talker or a ready mixer—it is the mathematically inclined individual who sees everything in terms of figures and who can reduce a proposition to an arithmetical formula before you can wink an eye.

"'Think what an advantage the man with a passion for figures has over the glib talker in selling commercial cars. The mathematical man doesn't have to rely on his tongue to get business or on his clever approach or witty stories or the good cigars he hands out. He relies simply and solely on arithmetic and common sense. He gets the whole thing down in black and white figures and shows them to the prospect. And, as we know that the trucks and tractors we sell are the best on the market for certain classes of work, the whole thing resolves itself into the logical prospect selling himself.

"'Now the question is, are you an arithmetical, mathematical salesman, or are you just a regular kind of salesman?'

"Generally the salesman says that if he isn't a mathematical salesman, he can learn to be one. I give some of them a chance. And some of them make good and some of them don't.

"I'm so strong for figures in selling trucks and tractors," continued this dealer, "because I never began to make money in this business until I got down to brass tacks figures myself in selling merchants, farmers, contractors and others.

"Consider the average contractor, for instance. Figures are the most important thing in life to him. If he figures correctly, he'll make money. If he figures wrongly, he'll be out.

"Now suppose I am trying to sell a five-ton truck to a contractor. I go to him and start talking about the appearance of the truck, about the new mechanism of the engine and all that sort of thing. The contractor isn't interested. He isn't a mechanic or an artist. There are no figures in my talk to get and hold his attention.

"But suppose I say to him: 'Here's a bunch of figures showing costs per load when our trucks have been used by other contractors in this territory, gasoline and oil costs, repair costs, loads hauled and so on. With this data you can figure just how much money you can make with this truck.'

"Right away this sort of a talk interests the contractor. I'm talking in a language he understands. He lives on just such figures and he grabs my data and digests it in about half the length of time that it would take the average man to get hold of it. And, in many instances, I make a sale where the customary form of approach and talk wouldn't get anywhere.

He Wants Information, Real Dope

"Consider, too, the retail merchant who is thinking of buying a little heavier truck than he now has. What sort of things about the truck is this merchant interested in?

"First off, the merchant is interested in knowing how the truck will make more money for him. This means that the service performed by this truck must be compared with the service he is getting out of his present trucks. Next, the matter of gasoline and oil costs must be considered. Also the life of the truck under the hard usage given it by the average retail store truck delivery man must be considered.

"All of this information calls for figures. And by giving the merchants such figures I've sold more trucks to retail merchants than I ever dared think of selling in the old days before I cultivated a passion for figures in pushing my business.

"And consider the farmer. The farmer may buy passenger cars for convenience and recreation, but he buys trucks and tractors, because he is convinced they will enable him to get more money out of his farm.

"How will the truck or tractor I am trying to sell the farmer enable him to make more money?

"That question calls for figures. It calls for data on the cost per acre of farming. It calls for data on the cost of hauling produce to the city or elevator. It calls for comparative data showing plainly and honestly what other farmers in his territory have done and are doing with the same trucks or tractors.

"There's the matter, too, of saving on the fewer number of horses needed on the farm as the result of buying the machine.

"All these figures must be personalized and individualized and localized to the farmer's particular farm and needs. The less general such figures are, the more convincing they will be and the easier it will be to make the sale.

"What chance has a man without a passion for figures in making sales of trucks and tractors under these circumstances?

"Is it any wonder, then, that I demand a passion for figures in my salespeople? And wouldn't a similar demand on the part of other truck and tractor dealers help them to make a bigger success out of their businesses? I think so, at any rate."

A Touring Conveyance That Provides Both Speed and Home Conveniences

THE so-called portable home of today has separated itself quite some distance from its pioneer counterpart of a few years ago. Since the later-day models provide both the speed and comfort of a closed driving car and at the same time all the conveniences of a modern cottage home, lovers of the road can now avail themselves of civilization's luxuries and still be surrounded with Nature's charms.

Each month brings forth news of another man's ideas as to the construction of a home on wheels. These jobs are generally the result of a contemplated tour through the scenic West, sometimes covering months of itinerate movements.

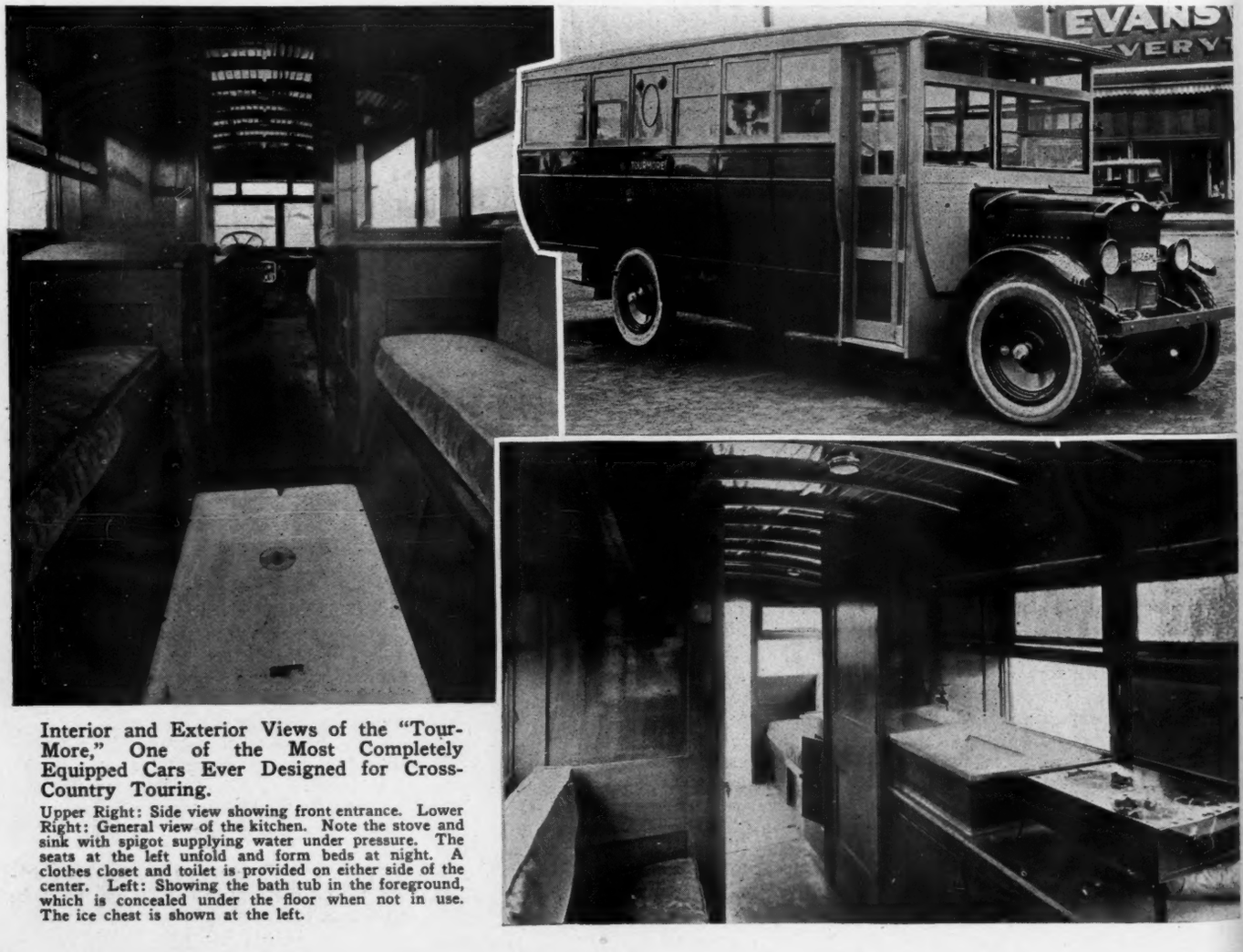
News of the latest contribution is that of the "Tour-More" developed and built under the direction of C. F. Rouse, of Pontiac, Mich., which recently made its appearance in Detroit. Mr. Rouse designed the body with the purpose of touring with his wife from Detroit to Yellowstone Park and Kansas City. The body was built to his special specifications by an Evansville, Ind., concern and was mounted on a General Motors Company bus chassis.

The unique body is equipped with every conceivable comfort for touring. The driver sits inside the body at the left of the car and the machine is controlled by center gear shifts and the usual touring car arrangement of clutch, brake and wheel controls. Directly back of him, on either side of the car, are two long rows of seats which with chairs scattered about the interior, will take care of 14 people.

At night these seats unfold and there are beds for four. An arrangement of kitchen utensils which would delight the eye of any woman has been accomplished and a good-sized stove is carried together with a refrigerator and ample room has been provided for cooking. Another unique feature of the equipment is a complete toilet with a bath tub and running water under pressure.

Inside of the body there is a writing desk, easy chair, a clothes closet, and alongside of the left running board a box has been built to carry equipment.

The entire body has been screened.



Interior and Exterior Views of the "Tour-More," One of the Most Completely Equipped Cars Ever Designed for Cross-Country Touring.

Upper Right: Side view showing front entrance. Lower Right: General view of the kitchen. Note the stove and sink with spigot supplying water under pressure. The seats at the left unfold and form beds at night. A clothes closet and toilet is provided on either side of the center. Left: Showing the bath tub in the foreground, which is concealed under the floor when not in use. The ice chest is shown at the left.

Flat Rate in the Small Shop

Opposition to This System in the Small Shop is Conceived in Misunderstanding and Careless Investigation. This Article Proves the Practicability of the Flat Rate System in the Small Shop. Its Establishment is Simple and Can be Accomplished Without Confusion and Inconvenience

Customers Are Protected and Mechanics Proved

By C. P. SHATTUCK*

THOSE who are opposed to the "flat rate" in service contend that the system is not practical for the small repair shop or service station. They admit, however, that it is a fine thing for the big service station having clerks to keep records and cost figures, but that it would never, never do, for the small place.

The writer has heard many discussions on the flat rate system. He has heard it discussed in various service conventions, among dealers and by service managers. And not a few mechanics have talked about it. The great trouble, however, with those opposed to it is that they have not analyzed the plan in an unbiased manner. They view it through the spectacles of selfishness by looking at the subject from one angle only, instead of viewing it from every angle.

Time Records Available

There is another class which admit the value and advantages of the "flat rate" but contends that it would not work out in their shop because they have only a few men, and these men have to perform all repairs from removing carbon to installing new bearings. They argue that it would cost them fabulous sums to obtain cost records and install such a system. Yet the majority of this type keep cost records, or at least they ought to, for **without knowing the time the mechanic spends on a job how can the customer be honestly charged hours of labor?**

There is this difference, of course, that in some shops the mechanic stamps his time card when starting in on a job and may perform a number of operations such as taking up main bearings, adjusting tappets, burning out carbon, tuning up engine, etc. If all is completed in the day there is a charge or record, if you please, of so many hours labor plus the parts or material used.

Inasmuch as the average service station keeps time records—and the majority find it quite necessary, for we have ever with us the owner who "cannot see how so many hours were spent on such a small job"—the foundation for the flat rate is already built, although some cannot see it. In other words, let us assume that the work order called for adjusting the main, connecting rod and camshaft bearings. Now to ascertain how long it takes Jones to do the work, it is divided into what is termed "operations." In this case there would be three, namely, No. 1—adjusting main bearings; No. 2—adjusting connecting rod bearings; No. 3—adjusting camshaft bearings.

How Time Records Can be Made

Now when Jones stamps his card and begins with the main bearings his time card or form will show when he started and when he finished the main bearings. Next he will indicate the time taken on the rods and camshaft separately. In other words, instead of allowing Jones to lump the hours of labor he separates the operations. Simple enough. All the foreman or service head has to do is to insist that it be done.

Right away the objection will arise that Jones may find only two or three bearings need adjusting and that if a price is to be made on adjusting bearings based on the work of adjusting four, and bearings requiring more than ordinary time, that the customer who has but two easy bearings to be cared for will be stung if charged a price equal to that charged for the other job. Right here is where the practice of fixing the cost for a single bearing comes in. An estimate or fixed price for adjusting a bearing, say a rod, can be obtained by Jones keeping the time on his card for one bearing. If he has two, three or four a record of time can be maintained.

Customer is Protected

Now as to the customer being stung. It is true that it may take longer to make an adjustment of one component than another due to inherent conditions, but if a mechanic were to adjust 50 or 100 bearings, and an average struck of the entire time, no one customer is going to be stung.

On the contrary he is going to be protected against being stung, for with a definite average time set for adjusting bearings the work is going to be performed in the "average time" or else the mechanic is not efficient. And we must consider that if the time was, say 5 hours, and due to favorable conditions it was accomplished in 4 hours, it would appear that the customer would be overcharged if it was done in that time and he was charged 5 hours. But the records maintained by service stations do not show this discrepancy. On the other hand, the same customer might have another task that would exceed by an hour the fixed average time, so should he have lost an hour on the bearing job he would not be a loser in the long run.

Elaborate System Not Necessary

Contrary to general belief it does not require any elaborate system or great expense to arrive at time records, and the flat rate is nothing else but a time proposition. The time cards can be so kept by the workmen, and supervised by the foreman, that the record of time consumed by Tom, Pete, Jim, John, etc., for doing any operation or repair can be had by the service head. All he has to do is to enter these records for a definite number of operations of the same character, then strike an average and see how it checks up. It is very probable that in going over the records he will note some rather striking differences in the time consumed by the different men on the same character of work. This studying of the time cards should reveal some very interesting angles of what we call the human equation.

System Proves Up Mechanics

If carefully analyzed, the records will in all probability show that Pete is not such a crackerjack on bearings as he thought he was. Probably Bill, who was not rated a high grade bearing man, is a better bearing man. Keeping and reading the records will grade the men much better than the conventional way and will develop semi-raw material into a high grade finished product. In this industry there are many mechanics who actually believe they are specialists on some certain repair and have sold the service manager the idea when they first entered the shop. Of course the service head knows a good man when he sees him, for if he checks up his work he can tell, or else he is not fitted for the job.

*Editor's Note—This is the second of a series of articles on the flat rate in service by Mr. Shattuck. The third will appear in an early issue.

In some shops certain men do certain work because they started in on it and no other man in the shop gets a chance, unless there is a rush, but there may be plenty of material which, if given the chance, could probably do as good work and faster than the man holding down the job. By this is meant that in the service end of the truck industry we have a number of square pegs trying to fit in round holes. It is not the fault of the men but rather their executives who hesitate or fear to develop new material.

Flat Rate a Few Operations

Now as to arriving at time records. It is admitted that with the small service station employing a few mechanics that it would be expensive to install clerks or others to obtain time records and when obtained to arrange the operations for each and every component on a truck chassis. The writer does not advocate that every small or medium sized service station should undertake at the outset to adopt a flat rate system for all work, but rather to "flat rate" a few standard or more generally called for repairs at first and to increase the number of operations from time to time. **A trial can be made and if not satisfactory,** both to the customer and the service station, the flat rate can be dropped. But if given an honest, fair trial, it will be continued and the number of operations increased.

It is suggested to those who wish to give the flat rate a trial, that a list of half a dozen or more operations be studied and time records kept of the work which comes most frequently into the shop. Any service head or foreman can, by looking over his records, ascertain what class of repairs lead. Let us assume that removing carbon, grinding valves and adjusting tappets are most often done. Furthermore, let us say that the engine has a detachable head. Now the time for removing the carbon only should be kept on a number of operations, a sufficient number so that a real average can be obtained and by different workmen doing the job. Next keep the time records on grinding the valves and similarly for adjusting the pushrods or tappets.

Assume that 25 or 50 carbon removing jobs have been performed and the average time is 3 hours. That would be the time limit for any job of this character. Now under the head of engine is set down "Removing carbon for model so and so engine." This operation can be given a number, say No. 1. The time required for removing and replacing the cylinder head, draining water and refilling the system, and removing and replacing the upper or outlet water pipe, as well as disconnecting the ignition wires or other components should be noted, because these figures will serve for records for other operations. For example: When a cylinder regrinding job is essential, and is to be included in the flat rate schedule, the components referred to will have to be displaced.

The time operations can be extended to other engine work and include adjusting main, connecting rod and camshaft bearings, fitting new ones, installing new crankshaft or camshaft, new timing gears, installing rings, piston pins and bushings, rods, etc. There may be 25 or 50 engine operations and by an operation is meant a complete job on a component. Each operation is given a number under the head of the unit, as the engine for example.

There are a number of operations easily flat rated. For example: Adjusting service and emergency brakes, or relining either. Work on the front axle can be divided into a number of operations such as adjusting wheel bearings, installing new bushings in tie-rod, spindles, etc. The complete chassis may be divided into 25 or more groups or heads and the number of operations under each may run from 5 to 40.

As previously stated, the fundamental principle of the flat rate is to arrive at an average or fixed time to do any given piece of work, and this is but one factor in the flat rate. The average or fixed time for completing a given job represents the labor cost. To this must be added the overhead of the shop to obtain the cost. Next the per cent profit is added and we now have the charge, price or cost to the customer or, in other words, a given price or a flat rate.

Much confusion has existed as to the meaning of the flat rate. Some believe it means the same price for a given job on a given design all over the country. Nothing could be more foolish or impractical. A mechanic in New York City may grind the valves of a Green four-cylinder engine in 3 hours and his fellow craftsman in a country town do it in the same time. But the owner of the truck in New York City will pay considerably more for the job because the overhead, rent per square foot of space, is much higher in that city than in the small town. And the mechanic in the small town may receive a smaller salary. So the ultimate price to the owner cannot be the same everywhere. The flat rate never was intended to accomplish this but what it is doing is to fix a time limit on an operation, so that the service manager can tell the customer in advance that grinding his valves will cost him $2 or $3 and **not a bill of hours.** Of course, on a given model of truck it may be that eventually the flat rate will be similar in towns and cities where the overhead is the same, but this will be some time distant.

System and Equipment Important

A factor that the service head and dealer should not overlook is that he must have a shop organization and system to establish the flat rate on a good sized scale. Also the factor of proper equipment must be taken into consideration. Without proper equipment, time and labor saving tools, it will not be possible to reduce the time of operations to a bed rock basis. Of course, a flat rate can be given on work performed with ordinary tools, but eventually competition in the flat rate field will compel the shop not properly equipped to either do business at a loss or equip the shop. In the next article the writer will discuss shop equipment and its relation to the flat rate.

August 22 is the date set for the auctioning of the New Process Gear plant of the Willys Corporation at Syracuse, N. Y. The sale will comprise approximately 7 acres of land with three manufacturing plants and main power plant, containing approximately 8 acres of floor space, all of the equipment and the aggregate of all inventories of productive and expense materials.

One of the Most Elaborately Equipped Motor Trucks in Operation Today

It is used as living quarters by Mr. T. Murphy, traveling showman of London, England. The truck chassis is a FWD. The body is of special construction. It is divided into two rooms that are completely furnished, one for a bedroom and the other for a living-room. Among other furnishings, the living-room contains a piano and a small cook stove. Much solid mahogany is used and the interior is elegantly finished. The cost of the body alone is approximately $9000.

Philadelphia Hauling Concern Convinced

A Recent Competitive Demonstration Staged in This City Discloses Astounding Comparative Figures on Operating Costs of Trailer Equipment Against Truck Equipment on a Certain Job. Operating Costs Reduced One-Third With an Increased Haulage of Six and One-Half Per Cent

Need for Efficiency at Warehouse Platforms

By M. J. QUOITS

As long as men seek to do things in a better and cheaper way there will be tests and experiments and trials. In the transportation branch of the automotive industry these experiments and trials are constantly being made. Every day there are those who seek new ways and means of achieving greater economy in motor transportation, while others record statistics that prove the greater effectiveness or economy of a particular system or a particular equipment.

One of the most thorough transportation tests, conducted under conditions ideal for comparison purposes, recently was made under the direction of Allen D. Billinghurst, eastern manager of the Lapeer Trailer Corp., Lapeer, Mich. Mr. Billinghurst has had an extended experience in foreign and domestic fields with automotive vehicles. Formerly he was foreign representative for the Federal Motor Truck Company, traveling through practically all the countries of Europe and South America. He acquired an unusually well-rounded knowledge of the transportation methods employed by the foremost countries of three continents. He is, therefore, qualified to judge, and he states that the recent test he conducted in Philadelphia was the most thorough and comprehensive from every angle of all he ever engaged in during his entire experience in transportation engineering.

The object of the test was to show the difference in operating costs between just motor truck equipment as against tractor and trailer equipment on a hauling job contracted for $1.00 per ton by a Philadelphia hauling contractor.

"In certain lines of haulage work trailer usage is unquestionably the only proper and economical method. Economy, through the reduction of operating costs, can be readily appreciated by the fact that a truck can pull two and a half times its carrying capacity; also, that railroad locomotives were not designed to carry their loads, but to pull them. Nor did the engineers design the locomotive so that it must stand idle, coupled to its freight-carrying bodies, while each was at different platforms receiving or discharging its load." These statements and others of similar nature were suffiicient to enable Mr. Billinghurst to interest and induce Wm. J. Meehan & Brother, hauling contractors, to co-operate with him in staging this competitive hauling demonstration.

As in all his activities, Mr. Billinghurst strived to present his idea of motor transportation with honest and unbiased facts. In order not to convey derogatory impressions or create false impressions as to the practicability of truck equipment, he further explained to the Meehans that the Lapeer semi-trailer was not intended to supplant the motor truck, but, by a more modern application of power enable the truck, converted into a tractor, to do a bigger day's work, deliver more tons, and reduce hauling costs from one-third to one-half.

Right: Unhitching Lapeer Semi-Trailer at One of the Pennsylvania Sugar Refining Co.'s Warehouses

Left: Trailer and Tractor Equipment at the Municipal Pier, the Start of Its One and a Half Mile Run.

The Meehans had contracted to haul a boat-load of 27,848 bags; 1,200 tons gross weight of Filter-Cel material used in the manufacture of sugar, from Pier No. 16 South, on the Delaware River to the Pennsylvania Sugar Refining Co's ware-

Showing How Time Was Saved. Just as Soon as the Loaded Trailer Was Uncoupled at the Platform, the Tractor Was Shifted and Hitched Up to the Empty, After Which the Outfit Started Back for the Pier

houses, a distance of one and a half miles, or a round trip of three miles.

As the whole proposition was for the purpose of compiling comparative tests for use in connection with future solicitations, and to prove to the satisfaction of the Meehans, together with representatives from other hauling companies who were invited to call at any time during the demonstration, by actually showing them the big savings possible, Mr. Billinghurst provided his equipment strictly gratis in every respect.

The competitive units consisted of three 5-ton trucks, which were a part of Meehan's regular equipment of some thirty-five trucks, and three drivers; and one 2-ton tractor, three Lapeer semi-trailers and one driver. Stevedores did the loading for both sides.

To Determine Actual Costs

As the primary object of this demonstration was to determine the economic savings in the use of the tractor and trailer principle of transportation of freight as compared with motor trucks, the conditions surrounding this test could not have been more ideal. The construction of the pier was such as to provide a natural division down the entire length. When discharged from the hold of the ship the hundreds of bags of Filter-Cel were arranged in equal piles on each side of the railroad siding running down the center. This permitted each of the two competitive units to work without confusion or interference on individual sides. And, as the destination of the material being hauled was the same for both units, all the important factors entering into the creation of fair competition such as, conditions of loading, distance of travel and conditions of unloading, were identical. Neither unit had an unfair advantage. In view of conditions as ideal as these, coupled with uninterrupted operation of both units for seven consecutive working days nothing short of accurate comparative figures of satisfactory averages could be expected.

A condition that is costing many concerns hundreds of dollars yearly was forcibly brought out by this demonstration. A casual understanding of the lack of platform facilities existing at both the loading and receiving points of many of our so-called efficiency concerns would make plain the expensive leakage through which enormous sums of money dribble annually. Lack of organization and system at the receiving station causes a flagrant loss of time, tying up expensive equipment, idling drivers and retarding efficient and economical movement in general. As labor and transportation eat heavily into the overhead of every business, application of a little common sense in planning the methods to be employed at the warehouse would cause a big annual saving. Mr. Billinghurst points out that if preliminary arrangements had been made at the receiving station of the Pennsylvania Sugar Refining Co., where many hours of valuable time was needlessly consumed by flagrant inefficiency, a still greater saving than shown by the demonstration could have been made. He figures that an additional reduction of 20 per cent would have been a conservative estimate. His message is: Systematize labor and methods at the loading and receiving stations.

Many Conditions Were Uncontrollable

One of the tables show the actual daily and total results obtained by each hauling unit is self-explanatory. However, it might be explained that on the last day of the hauling contest, because of the volume of tonnage being delivered in so short a time at the receiving platform of the Pennsylvania Sugar Refining Co., a delay of one hour and twelve minutes on one load and thirty-five minutes on another was incurred by conditions entirely under the control of the Pennsylvania Sugar Refining Co. But for this delay the trailer equipment would have been enabled to deliver three loads more, or 22 per cent more tonnage for the day. Mr. Billinghurst, however, very cleverly utilized this misfortune by showing that when properly organized, unloading delays can be almost entirely eliminated. He showed concretely the needless expense of such delays, particularly when the hauler is equipped with a trailer outfit that makes both loading and unloading points controllable, because of the inherent quick-movement characteristics of semi-trailers having automatic brakes and couplers.

A summary of the highlights of this demonstration is briefly given in the center box of this page. Equipped with facts such as these, salesmen cannot fail to get the attention of the hauling contractor.

Trailer Equipment

Date	Number Hours	Number Loads	Number Bags	Number Tons	Number Pounds	Number Miles
7/5...	9.55	16	1,720	74.8	149,640	48
7/6...	9.42	18	2,012	87.5	175,044	53
7/7...	10.05	17	1.875	81.5	163,125	51
7/8...	8.10	15	1,598	69.5	139,026	45½
SUNDAY						
7/10..	8.55	19	2,037	88.6	177,219	57
7/11..	9.00	17	1,820	79.2	158,340	51
7/12..	9.07	14	1,430	56.5	115,014	42
	64.14	116	12,592	538.0	1,077,408	347½

Truck Equipment

Date	Number Hours	Number Loads	Number Bags	Number Tons	Number Pounds	Number Miles
7/5...	9.45	17	1,573	68.4	136,851	51
7/6...	9.55	17	1,696	73.75	147,552	51
7/7...	9.40	18	1,774	77.2	154,388	54
7/8...	8.55	15	1,446	62.9	125,800	45
SUNDAY						
7/10..	9.25	18	1,739	75.6	151,293	54
7/11..	8.55	18	1,740	75.6	151,380	54
7/12..	9.00	17	1,650	71.75	143,550	51
	64.15	120	11,618	505.4	1,010,814	360

Daily Operating Cost on the Basis of 15,000 Miles Per Year

Trailer Equipment

THE TRAILERS DELIVERED.. 705½ Tons
At $1.00 per ton, Gross Income.... $705.50
Cost of Delivery at $21.18 per day or .278c per Ton 195.91

NET PROFIT on job by use of Trailers $509.59
NET PROFIT PER DAY 55.09
NET PROFIT PER TON ..... .712

Truck Equipment

THE TRUCKS DELIVERED.... 505.4 Tons
At $1.00 per Ton, Gross Income.. $505.40
COST of Delivery at $62.84 per day or .362c per Ton 439.88

NET PROFIT from Three 5 Ton Trucks for Seven (7) Days..... $65.52
NET PROFIT PER DAY..... 3.12
NET PROFIT PER TON..... .138

This Table Shows the Net Profit Per Ton Per Day on a Contract Price of $1.00 Per Ton for Hauling 1200 Tons Filter-Cel to Warehouse One and a Half Miles Away

Brief Summary of Economies

	Trailer	Truck
Cost per ton	$0.278	$0.862
Equipment cost	7850	15,000
Cost per bag	.011	.039
Cost per day	21.18	62.84
Cost per load	1.28	3.63
Tons hauled	538	505
Trailer Averages		
Tons per day		78½
Miles per day		51
Tons per hour		8½
Loads per day		17
Tons per load		4.6
Average three-mile trip in minutes		32

Trailer Equipment

	Per Day
Interest on investment at 6% on One 2 Ton Tractor, Three 6 Ton Trailers, Three Bodies, Freight and Federal Tax	$1.31
Payroll (Chauffeur)	5.00
Depreciation, 2 Ton Tractor (5 Years).	2.15
Depreciation, Three Trailers, Including Bodies (7 Years)	2.19
Gasoline, 15 Gals., 51 Miles per Day...	4.50
Repairs, Tractor (Basis of 2½c per Mile)	1.27
Repairs, Trailers	.35
Oil and Greasing	.25
Garage	1.15
Insurance, Tractor and Trailers. Fire, Liability, Property Damage	.62
License	.40
Tires, Tractor (Basis 15,000 Miles per Year)	1.20
Tires, Trailers (Basis 15,000 Miles per Year)	.46
Miscellaneous	.30
Total	$21.15

Truck Equipment

	Per Day
Interest on investment at 6% on Three 5 Ton Trucks, Three Bodies and Cabs, Freight and Federal Tax	$2.62
Payroll (Three Chauffeurs)	15.00
Depreciation (On 5 Year Basis)	10.57
Gasoline (Three Trucks) 42 Gals. @ 30c..	12.60
Repairs (On Basis of 3½c per Mile)	5.25
Oil and Greasing	.90
Garage	1.50
Insurance, Three Trucks with Bodies. Fire, Liability, Property Damage	4.90
License	2.00
Tires (On Basis 15,000 Miles per Year)	6.60
Miscellaneous	.90
Total	$62.84

Table Showing Net Profit Per Ton and Per Day on the Basis of Contract Price of $1.00 Per Ton for Making Delivery of This Boatload of 1200 Tons of Filter-Cel

The Rolling Store a "Comer" to Stay

Development of This Growing Field Offers Big Business to Both Truck Chassis and Body Builders as Well as Dealers

The Before and After of a Grocery Shopping Tour. Patrons Enter at the Rear and Leave Through the Front

STORES on wheels are making headway. Judging from present indications their use is becoming daily more universal. Aside from the considerations of convenience the economic advantages of direct deliveries from warehouse to consumer, accurate accounting methods and quantity wholesale buying makes the rolling store a comer to stay.

The rolling store idea has gripped the public. Convenience and conservation of energy are the considerations that appeal strongly to the modern housewife. In certain communities the service rendered by these portable stores is so complete as to furnish the homes along its route with meats, vegetables, cereals, pastries, groceries, etc. A service such as this is a boon to the mistress weary from her household activities. It isn't at all strange that this business has developed rapidly and promises to keep growing.

Get in on Ground Floor

The very soundness and practicability of the plan and the fact that various truck manufacturers are giving earnest attention to the production of vehicles of the greatest utility to the merchants engaged in this enterprise should make such a venture in those communities thus far unfavored with such a service an unqualified success.

The success of a new company, the Modern System Grocery Co., which has already ten of these rolling stores in operation in Columbus, is a very good guiding example of the possibilities of such service. This company is but one of innumerable others that have organized and are organizing through the middle west and the south. The idea promises to grow to large dimensions.

For the benefit of those of our readers who are interested in cultivating this potential outlet for the sale of motor trucks we are outlining below a description of the body, which was designed by the Acme Motor Truck Co. It is in the making of the body that the manufacturer is enabled to assist his dealers in approaching this field. The manufacturer, if not in a position to furnish a variety of these special and huge bodies, should at least be in a position to advise where such bodies are obtainable and provide complete data concerning every angle of the project. A general description as to the manner of conducting the business is also outlined.

The body illustrated herewith is 8 ft. wide, 20 ft. long and 6 ft. high, mounted on an Acme model 60 chassis, with a 12-in. monitor top which lets in light and ventilation. It is enameled white and attractively lettered and illustrated, advertising its purpose.

Perfect Display and Accessibility

The entrance of the buyer is at the rear. The purchaser passes through the aisle, on either side of which the merchandise on sale is displayed, and picks the goods desired, paying the driver-clerk who is seated at front upon stepping out of the store. As all the stock is package goods, no wrapping is required, and totaling amount of sales is also simplified. All cash is deposited by the driver in a cash register. The amount of foodstuffs, such as butter, eggs, vegetables, canned goods and other staples, carried in this vehicle, is surprising. The body has been remarkably well designed not only to carry a complete stock, but to advantageously display the articles on sale. Roominess has not been sacrificed for completeness of stock, as the arrangement makes for orderly compactness. The equipment also includes an efficient refrigerating system for those commodities requiring refrigeration.

The value of the stock carried by this particular store varies from $800 to $1000. As daily sales average from $100 to $150,

The Compact Systematized Interior of a Rolling Grocery Store is at Par With a Stationary Eestablishment

the stock turns itself about every ten days.

Each store operates daily the year round over a carefully planned route and follows quite closely a time table, so as to be at a given point at the same time each day. At the present time the stores are operating in the city of Columbus only, each covering a route from four to twelve miles in length.

A warehouse is maintained by the company, where the trucks are driven at the end of the day's trip. Stocks are replenished at night and trucks made ready for the next day. A supply truck is maintained and its routing is so maintained that each one of the rolling stores is visited by the supply truck and such stocks as are found to be getting low are replenished. The supply truck's visit to the rolling stores is planned so as to meet it either just before or just after the store reaches the point on its route where the greatest volume of sales is usually made, thereby insuring a complete stock at all points of the route.

The store does not return to the warehouse after it leaves in the morning until the day's work is completed. The driver secures his noonday meal at some point on his route or brings his lunch from home.

The overhead cost of the rolling store is considerably less than it is with the average permanent local store, the former requiring but one clerk, and he will actually sell as much as two to four clerks in the ordinary store, the selling is more evenly divided or distributed throughout the day in the traveling store, for once the customers learn that at a certain time each day their store will be at their corner, they soon adjust their buying to the schedule of the traveling store. All of these facts make for slightly lower prices in the traveling store, although to judge from the reception given these stores there is no need of a price inducement to attract customers to the traveling store, as the public seems to appreciate the advantage of having the store come to their door at a given time each day, the neat, orderly way the stock is displayed and the convenience and system found in every detail of the traveling store movement.

Judging from the experience of rolling stores in operation in various communities, a truck will pay for itself in approximately one year. In the case of this company, the first day that the first truck was out it commenced to do a satisfactory business in a locality which had not been previously advised of the coming of the truck. It is naturally expected that it takes a week or so to work up a route, but the experience of the first truck does not demonstrate that it would require any length of time.

As economics teach us that all business activities tend to follow the course of least waste in time, labor and money, it is safe to assume that the rolling store has come to stay. Hence it would be profitable to the business interests of dealers, truck and body manufacturers to give this sales outlet consideration. It's bound to pay.

Another Grocery Store on Wheels

TO use the slogan adopted by the owner, "The Grocery Store at Your Door" idea is in keeping with the growing popularity for this type of community service. The grocery store idea illustrated herewith is the innovation of H. L. Hintz, of 610 Greenfield Ave., Milwaukee, Wis. The finished production is the result of joint ideas and efforts of Mr. Hintz and the John Broenan Co., local automobile body builders.

This unique body is mounted on a Reo chassis. A door immediately behind the driver's compartment allows customers to enter the traveling store and select from shelves arranged on both sides of the car with an aisle between. Besides the shelves are ample bins and a refrigerator is provided for perishable goods. Skylights in the top of the car provide adequate lighting. The sides of the car are removable should it be desirable to convert the store for a period into a stationary dispensary of groceries, confections or soft drinks.

Mr. Hintz announces that this is the first car of what he hopes shall become a fleet in time. He expects to have the car in operation at an early date, and a regular route will be followed daily. A bell of distinctive tone on the car will announce his approach like the milk-man of bygone days used to summon the housewives.

Right: Side View of the Equipment Conceived by H. L. Hintz.

Left: Showing a Neat and Orderly Layout of Interior Fixtures and Merchandise.

S. A. E. Production Men to Meet

A national meeting of the Society of Automotive Engineers will be held in Detroit October 26-27 for the purpose of discussing problems of automotive production. The meeting is to be known as the S. A. E. Automotive Production Meeting.

Papers treating current production problems in a simple and practical way will be read and fully discussed in morning meetings on each of the two days. The afternoons will be devoted to factory inspection trips especially arranged for the purpose of viewing new and advanced production methods that will particularly interest the tool, inspection and production men. The principal object of this meeting is the promotion of an interchange of experience between practical factory men on automotive production problems which are troubling them in their daily work.

An S. A. E. Production Dinner will be held Thursday evening, October 26, where social friendships between production men will be promoted. Announcement of the locations of the meetings and dinner will be made in the near future.

Special committees of Detroit S. A. E. members are in charge of the arrangements for this national meeting. K. L. Herrmann, a Studebaker production engineer, is chairman of the committee which is selecting the papers and topics for discussion. Suggestions or requests to present papers should be addressed to the S. A. E. New York office.

A new record of 4464 applications to drive motor vehicles was established in New York City during the last week of May. A new record for a single day was set with 1044 license applications.

There Are Sales Possibilities in the Milk Transport Field

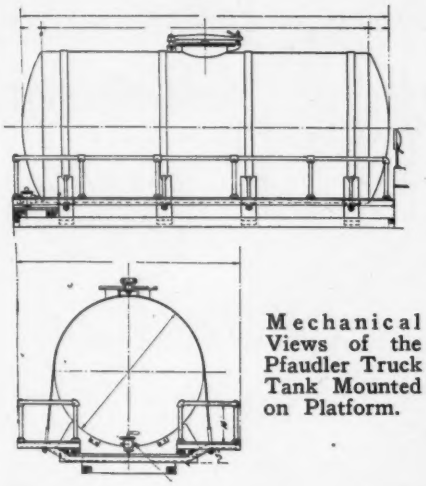
Glass-Lined Tanks Modernize Milk Haulage. New Methods Necessitate New Equipment

THE milk end of the dairy industry has made immense progress these last few years. The various stages of handling through which milk passes from the time it is dairied until it reaches the consumer's home shows definitely the mark of the motor truck and its body equipment. Dairyman, wholesaler and retailer, all profit by the savings resulting from the elimination of can handling, spillage, and enormous labor formerly involved in the cleaning the cans. In addition to these important features of economy, the ultimate condition of the product upon reaching the consumer possesses to a greater degree the original untainted freshness of milk just off the farm. The opportunity for contamination through frequent handling has been reduced manifold. Hence, the milk industry benefits directly from the motor truck and its kindred equipment both in so far as reduction of operating cost and sanitation of product are concerned.

Opportunity in Milk

A big business opportunity is afforded the alert dealer who will but get after those companies engaged in milk transport still employing obsolete, time-consuming methods. The field is more than potential, it is there.

Ever since glass lined milk truck tanks created a sensation at the 1921 National Dairy Show, milk has been coming into the foreground of public interest, and handling methods have been subjected to closer examination. Today, as a result of the glass-lined truck-tank development, some of the nation's largest milk companies are employing such equipment. An interesting incident as to the general acceptance of this modern form of milk transport is had in the investigational experience of the Detroit Creamery Co.



Mechanical Views of the Pfaudler Truck Tank Mounted on Platform.

This company originally purchased a 2000 gal. Pfaudler truck tank, manufactured by the Pfaudler Co., Rochester, N. Y., for the purpose of preparing comparative data on operating costs. Today this concern is operating a fleet of these tanks. It is needless to say that the original tank proved successful.

Advantageous in Summer

The company found many distinct advantages in operation. For example, during hot summer weather, traveling a distance of thirty miles from Belleville to Detroit, Mich., the milk showed only an increase of two degrees over the temperature registered at the start. This performance was considered very unusual in view of the capacity transported under the existing atmospheric conditions. Records taken in hot weather and during unusual heat spells show an average of less than 2 degrees difference in milk temperature during a haulage of more than 20 miles.

Another interesting characteristic of the milk tank outfit is disclosed in the following incident: Not long ago one of the trucks owned by this company tipped over on the road, and, although the tank was filled with milk, not a drop was lost, because the man-hole cover at the top, when closed, gave a perfect seal. Had this truck been hauling cans instead, the loss through spillage can readily be appreciated.

Details of Tank

The tank, shown in the accompanying illustration, is made of heavy plate steel, welded and lined throughout with blue-black glass enamel. It is fastened to the frame-work, mounted on the chassis by lugs and reinforced by heavy iron bands, approximately 3 in. x ⅜ in. The ends of the bands jut directly through the frame work and are held by heavy bolts. There is a pet cock which serves as an air outlet, and welded nipple, flush with the bottom of the tank, equipped with a sanitary lock. Accidental loss of milk is prevented by a special lock attachment. Access to the interior of the tank is through a manhole having a quick-acting, swivel-type cover, which is easily swung aside instead of lifted.

These tanks are made in standard capacities ranging from 400 gal. to 2000 gal. for mounting on chassis of from 1½ to 7½ tons in capacity.

After a lapse of eight years caused by the European conflict, the International Road Congress will convene next May at Seville, Spain. The program plans promises to be the greatest and most important conference on highway improvement ever held. American speakers so far chosen, include a number of well-known highway experts, executives of the N. A. C. C., etc.

Showing a View of the Detroit Creamery's Complete Milk Tank Fleet as It Appears Today

Establish a Policy—Then Stick to It

This Story is a Brief History of a Texas Dealer's Experience and Success. Kindred Lines Bring Profit

JUST one factor enabled the Service truck, to sail the ship of adversity state distributors of the Service Truck Co., Fort Worth, Texas, during the trying period of depression through which we are rapidly passing,—and that was and is business efficiency.

Early in 1917, C. B. Caswell, vice-president and manager of the present concern, took over the Service agency, pioneering this truck in a virgin and practically desolated region as far as new business opportunities in the truck field were concerned. It was a pure case of creating and maintaining a demand for a newcomer.

Correct business methods, proper service, integrity in every respect, and rebuilt jobs that were truly rebuilt, played a prominent part in not only dissipating the usual selling resistance meted out to newly founded organizations but in establishing a clientele that had confidence in the reliability of the concern. The business gradually expanded.

Firm on Policy

The period of national inflation naturally gave it a little boost, as it did all others, but unlike many other concerns, the mounting sales of this period failed to create the false impression of continuing prosperity that misled so many. The concern continued to build for the future, never letting up on its policy of consumer consideration. Herein lies the formula of its success.

Finally in 1919, C. B. Caswell reorganized, forming a corporation with a capitalization of $100,000. This expansion was necessary in order to take care of increased business.

Realizing the profits to be had in carrying allied lines and the value of this service to his customers, Caswell gradually added other products to his line, such as Fruehauf trailers, quite an assortment of special equipment, dump bodies, hoists and Bay City winches.

Cultivation of the large oil companies as well as lumber and ice companies throughout the territory resulted in an extensive business, totaling over $1,000,000 in 1919. The business since has developed so that at the present time some five hundred trucks are operating in northern Texas, most of which are taken care of by the service department, which includes four high class mechanics. Consumer satisfaction in the quality of service rendered has made necessary the invoicing of large stock parts. For example, the latest invoice called for between $50,000 and $60,000 worth of parts at a time.

Depression Not Marked

The above outline is designed to show what an ethical and undeviating policy will do for a concern. True, its business has been rather quiet for the past year and is not to be compared with the business of booming periods. This is a condition that left a universal mark. But the reputation of earlier days combined with increased selling effort, has enabled this company to slide satisfactorily through these hard times. Now, with the revival of business in general together with its need of new equipment, business is again mounting the grade. This company has sold as many as eighteen trucks during the first three weeks of May and in its opinion expects that before the first of year truck business in Texas will be exceptionally good.

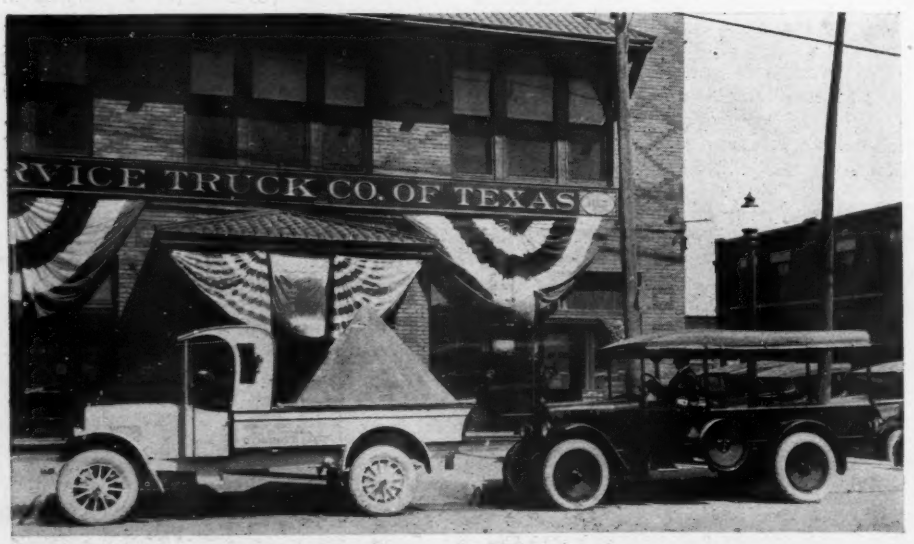
A word as to certain of this company's policies. Realizing the importance of being able to give prompt and efficient service, the parts department is unhesitatingly kept open at any hour. The shop as well is kept open at night when necessary.

A proper conception of the trade-in problem as far as the servicing of the truck is concerned, is the company's appreciation of the fact that an improperly service truck will ultimately cause irremediable consumer dissatisfaction. In this connection Mr. Caswell said:

Used Truck Policy

"We realize that we cannot afford to sell used trucks unless they are in first class condition. When a truck is traded in it is thoroughly overhauled before being offered for sale. This is especially attended to in the case of a Service trade-in. We have found that it pays to tear them down and rebuild them completely. In this way we protect the good will we have painstakingly established and the reputation of the truck. All rebuilt Service trucks carry the same guarantee as a new job."

As a result of this policy it has not been an uncommon occurrence for this company's salesmen to take orders throughout the West Texas oil fields for rebuilt jobs sight-unseen.



Corner View of the Present Home of the Service Truck Co., Fort Worth, Texas. A Service Demonstration and Speed Truck is Shown in the Foreground

Malleable Castings Association Publishes Booklet

An interesting little volume called the "Certified Malleable in Transportation and Industry" has been issued by the American Malleable Castings Association, of Cleveland, an organization made up of 70 of the principal producers of malleable iron in the country.

This book not only portrays the responsibility that certified malleable assumes when used for vital parts of automotive, railway, farm implement and general industrial construction, but also outlines the means employed by the A. M. C. A. in bringing the product of its members to a uniformly high standard and maintaining it at that point.

This book is said to be the most complete treatise ever written on the subject of malleable iron. It will be sent to interested people upon written request to the American Malleable Castings Association, 1900 Euclid Bldg., Cleveland.

Trucks Increase Creamery Business in Iowa

An average of 3600 lb. of butter is now being made weekly by the Traer Creamery Co., of Iowa under its new marketing plan of paying a premium for cream gathered by trucks. Although the new plan has been in force less than a month, the creamery is receiving four times as much cream as formerly and of much better quality.

Electric Truck Much Cheaper Than Horses in Retail Milk Delivery

Electric Vehicles Shorten Time of Delivery, Reduce Number of Delivery Units and Show a Saving of Nearly $24,000 a Year

By C. P. SHATTUCK

FOR some time past certain interests identified with horse-drawn equipment have conducted and still are conducting a campaign to influence the business world in favor of the equine. This subtle propaganda has been directed against the truck and an effort has been made in generalities to show that despite the increasing use of trucks that poor old Dobbin and the wagon was the best combination and that it provided cheaper transportation. Those fathering the "back to the horse" movement prepared figures, endeavoring thereby to sustain their arguments and have stressed certain lines, for example, such as the delivery of milk. Here the publicity man of the horse interests pounced upon the "intelligence" of the horse, pointing out that he could be speedily trained and would stop and start of his own accord. There was, claimed the horse interests, no chance at all for the truck against the horse in the milk delivery field. Horses would always be supreme, said they.

Factors to be Considered

There are two general factors to be considered in transportation in making a comparison between two or more methods. The first and most important is costs, and costs may be analyzed on the ton mile, package or quantity basis. Next in importance is the time saved. Where the new unit saves time it means a smaller number of units. There is also the factor of increasing the delivery or territory.

The horse propaganda has been successful only to the extent that it has created sales resistance in a few fields, such as the milk delivery, but in this field, generally conceded to be best served by the horse, it has been proven that horses are not the best and cheapest by actual tests, time studies and cost figures.

Tables shown herewith show that with a large milk delivery company that 44 trucks replaced 54 retail horse-drawn equipment; that each truck could be operated and maintained cheaper than the horses and that the saving per year was nearly $24,000.

The company operated 54 retail horse-drawn routes of which a few had wholesale stops. There are four wholesale down town routes, but these were not considered in the analysis. There are two gasoline trucks which relay the milk to the delivery vehicles.

The milk company was approached by a representative of the Ward Motor Vehicle Company, Mt. Vernon, N. Y., and obtained permission to make an analysis of the transportation. The engineer spent considerable time in studying conditions, accompanying the drivers of the horse drawn vehicles, and a model WM Ward electric was placed in service on the longest and most severe route. Observations were then made to determine the actual conditions encountered in delivering milk from a side door body. Among these were the efforts required to step in and out of the body, the height the delivery tray had to be raised in entering the body and the time required to start and stop the truck. It was found that the side door body was best adapted to the retail delivery of milk.

Points delivered per route. Average of 23 routes	375.6
Miles per route. Average of 54 routes. (Total distance from and to the plant)	12.24
Weight of loads in pounds. Average of 23 routes	2266.7
Stops per route. Average of 13 routes	114.3
Points delivered per stop. Average of 13 routes	3.06
Points per mile of route. Average of 23 routes. (Exclusive of distance to the first and from the last stop)	27.8
Points delivered per minute. Average of 12 routes. (Time off the truck)	1.91
Total time on route in hours. Average of 12 routes. (Leaving and returning to plant)	6.033
Estimated time saved in hours. Average of 22 routes	2.52

Table A

Data on Complete Time Consumed

The data compiled included the time consumed to the route or beginning of delivery of milk; that consumed in starting, stopping and traveling; minutes from route; miles from route; time consumed in delivery; weight of vehicle empty and loaded; driver's weight; total miles traveled; current consumed and number of stops made. The grade and condition of roads were also included in the survey.

While there were 54 horse drawn routes but 25 were covered by the truck, these being those which would severely test the efficiency of the truck. The same amount of milk was carried as by the horses, same stops, etc., made and the regular driver of the wagon employed. Special effort was made to duplicate conditions as they would be if the driver was unaccompanied and performing all the operations of delivery and driving himself. The route foreman co-operated by supplying data on time, etc., required to cover with horses. Mileage on those routes not actually covered by the truck—balance of the 54—were obtained by using an automobile and odometer.

Less Time Spent on Street

Among the interesting features shown by the electric truck was that the driver reached his customers too early so the truck started out later, which meant the driver did not have to report so early. It also developed that the route was covered much quicker and that the truck was back to the plant much earlier. In a number of instances it was essential for the truck to stand idle in order to approximate the horse and wagon schedule because of particular local conditions. The time saved was computed by subtracting that of the truck from that of the average time of the horses. In this particular the time was supplied by the route foreman. Figures had been kept, of course.

The accompanying table A shows conclusively the summary of the delivery analysis and that the time saved, average, was two hours and 52 minutes.

Table B shows the miles, time saved, weights and total miles traveled by the truck.

Table C deals with costs and shows the expense of the 54 horse drawn routes versus 44 electrics which would replace them. In compiling the analysis the depreciation of the horse is charged at 20 per cent, or making the average life of the horse at 5 years, although in New York City it is estimated at 4 years. The figures show a comparison on a 10 year basis and that depreciation of the electric is placed at 10 per cent per year. These figures are based on the life of the electric and are held to be conservative by the Ward Motor Vehicle Company. The saving effected is nearly $24,000 the year. Comparing the individual unit, horse versus a truck, the saving is nearly $300.

Routes	Miles on Route	Time Saved Hrs.	Time Saved Min.	Horses Used	Weight of Load	Total Miles Traveled
1	6.3	2	15	2	1600	12.1
2	6.3	3	15	2	1575	13.9
3	9.1	2	15	2	1701	14.6
4	5.4	2	15	1	2400	7.0
5	10.3	2	15	2	1375	17.02
6	7.8	3	00	2	1885	15.2
7	4.4	2	00	1	2100	11.5
8	7.1	3	30	2	1475	13.0
9	5.3	2	15	1	1375	12.4
10	6.6	2	00	1	1875	15.2
11	10.4	2	15	2	2125	18.1
12	9.3	*	..	2	1375	18.6
13	5.8	2	15	2	1910	8.2
14	5.8	2	15	2	3803	10.0
15	5.4	2	15	1	3850	7.0
16	8.9	2	30	1	2090	9.9
17	10.1	2	30	2	2325	12.7
18	8.9	2	30	2	2625	14.3
19	8.2	2	30	1	2085	11.4
20	12.5	2	30	2	2225	17.8
21	5.1	2	30	1	2375	8.4
22	11.1	3	00	2	1935	17.7
23	7.3	3	00	1	2355	12.8
24	4.1	2	30	1	1845	6.9
25	6.7	3	00	1	1850	9.8

* No record.

Table B

It may be contended by the horse propagandists that figures are easily compiled, but every analysis made by the engineering force of the company is a contract that obligates the factory. In the purchaser's contract is written a guarantee which in effect is that after the analysis is made and recommendations accepted by the prospect, that if the units do not function as guaranteed, the trucks become the property of the factory. Therefore in making an analysis all estimates are conservative to provide a factor of safety.

The milk installation described shows a means of combatting the horse propaganda and for the truck dealer invading fields of endeavor where the horse is supposed to be firmly entrenched. In the installation referred to gasoline trucks are employed and it was recommended that their use be continued which brings up the policy of the Ward Motor Vehicle with respect to the gasoline truck. It is their policy to recommend the use of the gasoline truck where it best serves and a number of installations of fleets by this company shows use of gasoline trucks and

54 Retail Horse-Drawn Routes	
Feed	$41,273.76
Wagons, repair and painting	14,079.73
Harness	3,268.15
Shoeing	6,008.45
Interest on investment, 3%	810.00
*Depreciation	9,000.00
Total	$74,440.09
10 Year cost	$744,400.90
44 Electric Trucks	
Current at 2½c per KWH	$7,395.78
Cleaning and lubrication	660.00
Repairs and parts, chassis	1,386.71
Body repairs and painting	4,752.00
Battery expense	10,807.92
Tires	2,459.10
Repairs, building or rental	2,772.00
**Interest on investment, vehicles, 3%	2,545.30
Interest on investment, equipment, 3%	390.00
**Depreciation, vehicles, 10%	8,484.35
Depreciation, equipment, 5%	650.00
Insurance	1,138.59
License	176.00
Garage help	7,200.00
Total	$50,817.75
10 Year cost	$508,177.50

*Horse at 20 per cent, stable at 5 per cent, wagons at 10 per cent, harness at 20 per cent, and equipment at 10 per cent. Average life of horse is figured at 5 years, although in New York the average is 4 years.
**Less tires and batteries.

Table C
Yearly Cost of Operation

recommendation for the use of same in the analysis.

Can electrics be merchandised by the gasoline truck dealer? The Ward Motor Vehicle Company says they can and have a number of dealers who are so doing. It is pointed out that the electric is an aid to the dealer in rounding out his line, i. e., enables him to sell transportation in certain industries in which it has been thought that the horse alone is practical and economical. In the majority of fleet sales made by the company and its distributors there have been gasoline trucks sold also by the same dealer for there was a field for the gasoline truck. And it is pointed out that the electric helped sell the truck.

Cognizant of the fact that the dealer appreciates real factory co-operation in selling and analyzing transportation the Ward Motor Vehicle has evolved a dealer policy which is unusual. It includes co-operation in making an analysis, and a liberal policy insofar as commission is concerned where the factory makes the sale or national business is involved. There is also a very liberal co-operative advertising policy.

Midwest Completes Its Reorganization

The Midwest Engine Co., of Indianapolis, Ind., has sent out the following statement concerning the reorganization of the company, which has just been completed:

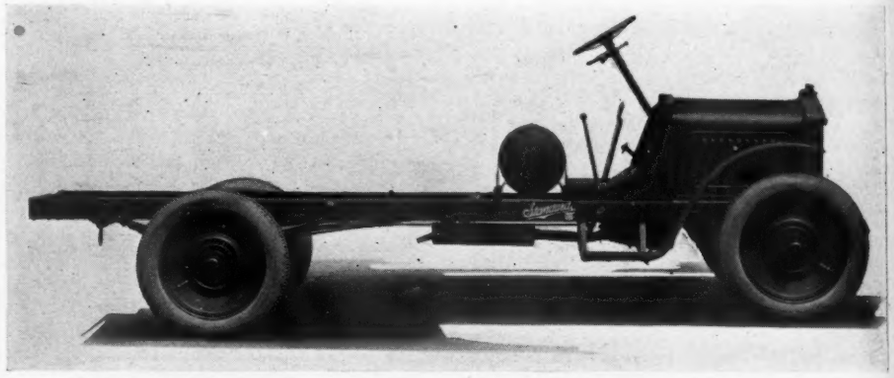
"The reorganizatiton of our company has now been accomplished. First—by the present preferred stockholders subscribing for the $1,000,000 of bonds, most of which subscriptions have already been paid and the money in the bank (thus showing our stockholders' faith in our possibilities.)

Second—the sale of the assets of the company was confirmed in the Marion County Superior Court, Room 3, by Judge Solon J. Carter, on July 12th.

Third—The purchasers now are proceeding with the work of incorporation; election of directors and officials. So, with a line of products, including engines, pumps, turbines, etc., that are firmly established and built on a basis of dependability and sterling value; with ample capital available as well as all necessary equipment; the affairs directed by an efficient organization at both the Indianapolis and Anderson plants; we solicit the continuance of further interest and business.

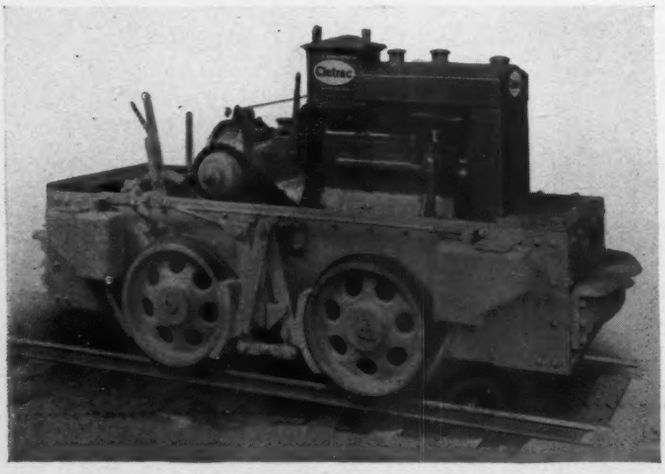
Fourth—at present we have on our books business approximating $2,000,000, and with worth-while concerns. For the future, we plan an even more aggressive campaign for additional business of all sorts.

Fifth—The new company will come into existence by early August in a strong financial position—the intervening time being necessary for the completion of all legal details before the formal discharge of the present operating receivers.



Side View of the New Standard Model 75 Chassis Recently Announced

The christening of this new job is an interesting anomaly. Fred Fisher, of the Standard Motor Truck Co., says that Model 75 was chosen as complimentary to the French 75, used by the American Army during the war. For better understanding it is explained that the French 75, the remarkable gun used so successfully by the A. E. F., is known for its durability, ruggedness, speed and efficiency. Hence, the significance of the name is interesting. Additional constructional details of this model may be had by referring to the July issue of the COMMERCIAL CAR JOURNAL, page 27.



New and Unique Use for a Tractor Power Plant

The illustration shows a new light industrial locomotive just announced by the Atlas Car & Manufacturing Co., Cleveland, Ohio, in which is used a Cletrac power plant made by the Cleveland Tractor Co., Cleveland. It is the Model F minus its side frames, tracks, seat and steering wheel. It is set bodily in the frame of the locomotive. For road construction, industrial railways and general plant handling, this combined Cletrac-Atlas has already given excellent results.

Country's Longest Milk Route Now Using Trucks

The longest milk route in this country, if not in the world, is now using 1500 gallon glass-lined thermos tanks mounted on trucks. It is reported that these tanks eliminate a large percentage of leakage loss. The milk arrives at San Francisco at a temperature only two degrees higher than when it was received in tanks at the cooling station, thereby keeping the growth of bacteria down.

EDITORIALS

Has the Small Town Been Thoroughly Cultivated?

MANY reliable truck dealers in the larger cities will admit that the competition which they have to buck in some instances is nothing short of ruinous. They are daily facing the unscrupulous dealings of the shoestring type of dealer and the vicious policies of the large manufacturer who is forcing business regardless of the effect upon the industry.

Now every legitimate dealer knows this. Does he realize, however, that such a state of affairs exists in many other lines just as it does in the truck industry? Time alone will eradicate these evils and the dealer who has the courage to stick to honest business policies will eventually win out.

On the other hand isn't much of this fierce competition due to the dealer's over ambitiousness to get in on a deal which he knows will call for price cutting, long term payments, and so forth? Why does he bother with such deals when he knows that all chances for making a profit are against him?

Wouldn't it pay the reliable dealer to thoroughly cultivate the smaller towns in his territory for prospects, by appointing the best passenger car dealers in those towns as sub-dealers? Many small towns also have reliable honest garagemen who could be appointed as representatives for his truck. These men are well known in their community, as a rule, and they know the sales possibilities. They are personally acquainted with most of the business men in their town and their word bears a great deal of weight with the town merchant.

In the farming communities especially this fact is pertinent, that the farmer will be more easily sold by a local man than by a salesman from the dealer's establishment located in the city.

Too many dealers are prone to follow the crowd, so to speak, in chasing a big city prospect where there are probably too many on the trail already, and where the sale is consummated on a price cutting basis and a "get the business at any cost" basis.

The wise dealer will do better by thoroughly covering his territory with sub-dealers, especially in that portion of his territory which has been neglected because in times past it was so much easier to get business in another section.

Getting Set for Winter Business

THE dealer, probably just recuperating from the effects of his vacation or perhaps ready to indulge in one, does not see any reason for giving any thought to what's going to happen next fall and winter, at this particular time. But, what that dealer should do is to mark his calendar for the first week in September, as the start for his fall and winter campaign.

The dealer ought to start then to lay out a definite campaign. The dealer who waits until the first flurry of snow makes its appearance, to map out a sales campaign for winter business, will find that many of his competitors have been on the job.

Vocational selling has taught many dealers that certain industries have their greatest periods of activity during certain seasons of the year. Naturally the dealer who concentrates on such industries in advance of their busy season will have the advantage of the dealer who waits until the last minute.

Even an early settlement of the coal and railroad strikes will cause a greater demand and rather a sudden one on the retail coal dealers. Some coal dealers will find themselves hard pushed to make deliveries, and therefore the retail coal field will undoubtedly offer an outlet for many more trucks this fall than would have been the case under normal conditions.

The point we want to emphasize is simply this that the dealer who doesn't plan far enough ahead cannot expect to get his share of the business, when the actual time for buying arrives.

In this campaign the service department should also be considered. A letter should be sent to the owner in the early part of September, suggesting that the truck should be given a careful inspection. When that inspection takes place the dealer should make a careful check-up of the condition of the truck and suggest the application of such devices which will make for the utmost economy in operating the truck during the winter months. Cabs and winter bodies, heating apparatus, priming devices, skid chains and all necessities for winter service can be sold to the truck owner, beforehand, if the dealer will make a determined effort to do so. The time to do this is as early as possible before the cold weather approaches—not when we are in the midst of it.

News of the Trade in Brief

Additional News, Personal, Factory and Trade Notes on Pages 64, 66 and 68

Parts Manufacturers to Discuss Timely Topics

THIS year's convention of the Motor and Accessory Manufacturers' Association at Buffalo, N. Y., September 13, 14 and 15, will be a timely congress of the automotive industry.

In view of the record breaking production of cars and trucks during April, May and June, executives are eager to survey the trade horizon and exchange viewpoints with leaders in all branches of the business. The opportunity for this sort of discussion will be afforded at the various general sessions and departmental conferences at the Buffalo convention.

Alfred Reeves, general manager of the National Automobile Chamber of Commerce, will speak on "Trends of the Industry and the Outlook for 1923." The discussion following this address will be led by A. H. D. Altree, vice-president of the American Bosch Magneto Corp. A topic of timely and paramount interest, "Integration and Mergers in the Automotive Industry," will be discussed by C. A. Dana, president of he Spicer Manufacturing Corp. Mr. Dana is one of the outstanding authorities on this subject, because he has been a leading figure in several important consolidations during the last few years, involving the Spicer Manufacturing Corp., the Parish Manufacturing Co., the Sheldon Axle and Spring Co., and the Salisbury Axle Co. T. M. Simpson, credit manager of the Continental Motors Corp., will speak on "How Creditors Can Aid in Rejuvenating and Reorganizing Embarrassed Companies." One or two bankers of national reputation will address the convention on financial problems of the automotive industry. Several other topics and speakers assigned to discuss them will be announced later. The programs for the special sessions of the Advertising Managers' Council, the Traffic Managers, and the Export Managers will also be announced shortly.

Free-for-All Symposium

One of the features of the Advertising Council meeting of the convention will be a round-robin discussion on "My Best Bet for Getting More Return on the Advertising Dollar." This free-for-all symposium will be lead by S. E. Baldwin, advertising manager of the Willard Storage Battery Co., Cleveland, O., and all publicity and merchandising executives of the affiliated companies will participate.

E. H. Broadwell
President, M. & A. M. A., and General Manager Fisk Rubber Company

The papers and discussions will be devoted exclusively to questions affecting sales promotion and advertising in the automotive industry, primarily from the angle of the manufacturers of units and equipment. Thus the Conference will in no way duplicate the functions of the more general advertising bodies.

E. W. Clark, advertising manager of the Clark Equipment Co., and chairman of the Council and its Executive Committee, will preside at the Advertising sessions.

The status, responsibility and executive authority of the advertising manager in relation to other officials in the company will be discussed in a paper presented by Maurice Switzer, vice-president of the Kelly-Springfield Tire Co., who has just been appointed to the Executive Committee of the Council. Mr. Switzer's views will carry particular weight because he himself has advanced from the position of advertising manager to vice-president. He is a firm believer in greater executive authority for the advertising manager. The discussion on this subject will be led by Joseph S. Jacobs, advertising manager of the American Hammered Piston Ring Co., Baltimore, Md.

J. C. McQuiston, manager of the Department of Publicity of the Westing-

Coming Events

SHOWS

August 18 to 26, 1922—Aurora, Ill. Automobile show on the Fair Grounds of the Central States Fair and Exposition Co. Passenger cars, trucks, tractors and accessories. L. L. Fest, general manager, 57 Main St., Aurora.

August 28 to September 2, 1922—Columbus, O. Automobile show in connection with the Ohio State Fair.

September 4 to 9, 1922—Indianapolis, Ind. Automobile and Accessory Show in conjunction with the Indiana State Fair. Auto Show Bldg. Auspices Indianapolis Automobile Trade Assn. J. B. Orman, Mgr.

September 4 to 9, 1922—Hartford, Conn. Annual Automobile Show at the Connecticut Fair Grounds.

September 4 to 9, 1922—Spokane, Wash. Annual automobile show held in connection with the Spokane Interstate Fair.

September 13 to 15, 1922—Buffalo, N. Y. Sixth annual convention of the Motor and Accessory Manufacturers' Assn., Hotel Lafayette. M. L. Heminway, general manager, 33 West 42nd St., New York City.

September 23 to 30, 1922—Memphis, Tenn. Annual Automobile Show at the Tri-State Fair Grounds. Auspices of Memphis Automobile Dealers Assn. H. W. Osoinach, Sec.

October 7 to 14, 1922—New York City. Electrical Exhibit at Grand Central Palace. Electric Automobiles. Norman Maul, 130 East 15th St., New York City.

October 16 to 20, 1922—Atlantic City, N. J. Accessory Show and Convention of the Automobile Accessories Branch of the National Hardware Assn. of the U. S., at the Ambassador. T. James Fernley, Sec., 505 Arch St., Philadelphia, Pa.

November 13 to 18, 1922—Chicago. Annual Exhibit and Convention of the Automotive Equipment Assn. Coliseum.

January 6 to 13, 1923—New York City. Annual Automobile Show of the N. A. C. C., in Grand Central Palace. Passenger Cars and Accessories. S. A. Miles, Mgr., care of N. A. C. C., 46th St. and Madison Ave.

January 27 to February 3, 1923—Chicago, Ill. Annual Automobile Show of the N. A. C. C., in the Coliseum and First Regiment Armory S. A. Miles, Mgr., care of N. A. C. C., 46th St. and Madison Ave., New York City.

CONVENTIONS

Atlantic City, N. J. October 17 to 20, 1922—28th Annual Convention of the National Hardware Association of the United States. Automobile Accessories Branch exhibit and meeting at the Ambassador. T. James Fernley, Secy., 505 Arch St., Philadelphia.

Chicago, Ill., September 14 and 15, 1922—National Used Car Conference, auspices of the National Association of Automobile Show and Association Managers. Neal G. Adair, Exec. Sec., 239 West 39th St., New York City.

Chicago, Ill. October 18 to 20, 1922— Convention of National Association Farm Equipment Manufacturers.

Cleveland, O., September 11 to 15, 1922—16th annual convention, Association of Iron and Steel Electrical Engineers, Cleveland, Public Hall.

Detroit, Mich., August 29, 1922—Convention of the National Safety Congress.

Detroit, Mich, October 26 and 27, 1922—Autotive production meeting of the Society of Automotive Engineers.

Grand Rapids, Mich., November 21 to 23, 1922—Annual Meeting of the Michigan State Good Roads Assn.

Santa Barbara, Calif., October, 1922—Annual General Convention of the California Automobile Trade Assn. Robert W. Martland, Sec., Pacific Bldg., Oakland, Calif.

FOREIGN EVENTS

Berlin, Germany, September 25 to October 3, 1922—Automobile show at the Kaiserdamn Hall, direction German Automobile Manufacturers' Association.

Copenhagen, Denmark, September 16 to October 1, 1922—Exhibition of firefighting and prevention appliances. Address Danish Foreign Offices at Washington.

London, England, October 12 to 23 1922—International Commercial Vehicle Exhibition at Olympia.

London, England, November 8 to 18, 1922 (tentative)—Olympia Automobile Show.

Paris, France, October 4, to 15, 1922—Annual Automobile Show at Grand Palais.

Rio de Janeiro, Brazil, September 7 to November 15, 1922—Automobile Show during International Exposition.

The Hague, Netherlands; September 15 to 20, 1922—Annual Automobile Show.

M. L. Hemingway
General Manager of the M. & A. M. A.

house Electric and Manufacturing Co., will speak on the need for greater standardization of printed matter as a means of reducing advertising costs.

Publicity problems affecting both trade papers and general press will have an important place on the program. They will be taken up under the general heading, "What is News," and will be discussed by Walter Birmingham, automobile editor of the Chicago Evening Post and James Dalton, news editor of the Class Journal publications.

Edward S. Jordan, president of the Jordan Motor Car Co., is expected to address the meeting on behalf of the advertising executives of the National Automobile Chamber of Commerce. E. W. Clark, chairman of the Council of M. & A. M. A. recently spoke before the Advertising Managers' Conference of the vehicle manufacturers at Chicago.

"Charting the Future Markets of the Automobile Industry" will be the theme of two papers to be presented by C. A. Musselman, treasurer and general manager of the CHILTON COMPANY and Harry Tipper, business manager of the Class Journal Co. The field for co-operation with the trade papers on merchandising and research will be considered under this heading.

President E. H. Broadwell and general manager of the Fisk Rubber Co., will preside at the general session.

Plans for the meeting of the credit managers are in charge of a Committee headed by C. A. Burrell, manager of the Credit Department of the Motor and Accessory Manufacturers' Association aided by the following;

L. L. Smith, asst, treas., the B. F. Goodrich Co., Akron, O.
M. A. Moynihan, treas., the Gemmer Manufacturing Co., Detroit, Mich.
F. R. Wilhelmy, asst. treas., Cleveland Tanning Co., Cleveland, O.
R. E. Hayslett, treas., Hydraulic Steel Co., Cleveland, O.
A. H. D. Altree, vice pres., American Bosch Magneto Corp., Springfield, Mass.
T. E. Challenger, credit mgr., McCord Manufacturing Co., Detroit, Mich.
R. S. Harvey, treas., Rees Manufacturing Co., Pittsburgh, Pa.
L. E. Bellows, pres., Walden Worcester, Inc., Worcester, Mass.
H. M. Reinecke, asst. treas., Continental Rubber Works, Erie, Pa.
T. Latimer Ford, asst. secy. and treas., American Hammered Piston Ring Co., Baltimore, Md.

W. O. Rutherford, first vice-president of the Association and vice-president of

W. O. Rutherford
Vice-President, B. F. Goodrich Company, and First Vice-President, M. & A. M. A.

the B. F. Goodrich Co., Akron, O., will be chairman of the session devoted to foreign trade. Mr. Rutherford is a member of the Association's Board of Directors and chairman of the Foreign Trade Committee.

Herman Deuster, manager of the Traffic Department of the M. & A. M. A. will preside at the convention meeting on traffic and transportation problems.

A Committee of Buffalo members, headed by O. J. Rohde, vice-president of the Wire Wheel Corporation of America, has charge of arranging for the Thursday get together sessions and an entertainment program. It is planned to devote the third day of the meeting to a field frolic of outdoor sports.

Truck Industry Rallies to Railroad's Aid

CHARLES CLIFTON, president of the National Automobile Chamber of Commerce, in a statement recently declared that the automobile industry will protect the public in case the railroad strike becomes serious. In his statement, Mr. Clifton said:

"Protection for the public is assured by the motor car and motor truck if the railroad strike becomes serious.

"Several of the larger cities have already prepared emergency organizations to handle the transport situation.

"The National Automobile Chamber of Commerce has listed 935 motor truck lines which could be of material aid in a transportation crisis.

"The country could not dispense, even for a short time, with a major avenue of transportation such as the railroads, without suffering. Study reveals the fact, however, that there are enough motor cars to handle the passenger traffic, if necessary, for an indefinite period, and that there are sufficient motor trucks to prevent acute shortage in essential supplies for sixty days. It would be possible, in fact, to maintain our large cities on a ration basis for an indefinite period.

"Surveys completed within the past few days in New York showed that a sufficient quantity of milk for the necessary uses in the household and for invalids and children could be brought in by motor trucks from distances of 150 to 200 miles. The daily consumption of milk amounts to 2,670,000 quarts. Other foodstuffs consumed daily in New York are: 5,145,804 eggs, 219,527 pounds potatoes, 434,000 pounds butter and 3,482,322 pounds of fresh and provisioned meat. The Port Authority of New York believes that the staple vegetables, such as potatoes, onions, cabbage and carrots, could also be supplied by trucks from nearby sections.

"Reports from Cincinnati indicate that the milk supply will not be materially affected by the strike. Cincinnati consumes daily approximately 190,714 quarts of milk, of which less than 3 per cent is brought into the city by railroads under even normal conditions.

"The 3,800 farmers shipping milk into Cleveland, which daily consumes about 381,428 quarts of milk, are using trucks altogether. Milk coming into Philadelphia by trucks now amounts to 64,169 quarts daily.

"It is estimated that the trucks operating out of Louisville, Ky., will soon be handling 500 tons of supplies both on the outbound and inbound trips. Under normal conditions the trucks and interurbans handle 75 per cent of all perishable foodstuffs in Kentucky and southern Indiana, Louisville daily consumes 116,086 quarts of milk, 224,121 eggs, 151,405 pounds of fresh and provisioned meat, 18,869 pounds of butter and 9,544 pounds of potatoes.

"Daily scheduled motor truck service to all industrial centers within 75 miles of Indianapolis will be maintained. Five completely equipped transport terminals have been established. Consignees door delivery on all express and first and second and third class freight shipments will be made. Pick-up of all freight consignments at shippers' platforms will be made if such service is ordered the day prior to the date of shipment. Special service on express and all classes of freight will be maintained between Indianapolis, Chicago, Detroit, Cleveland, Columbus, Cincinnati and Louisville.

"The meat packing industry will not be materially affected as 2,500 head of hogs are hauled daily by trucks into the St. Joseph, Mo., stockyards. Fifteen motor express lines for handling live stock shipments within radius of 45 miles of Kansas City have been established. Another Kansas City motor line is planning to extend its radius of haul to a maximum of 65 miles.

"Farmers are using trucks extensively to bring their products to the consumer markets direct. The Bureau of Crop Estimates of the United States Department of Agriculture has discovered that the motor-drawn vehicle travels 25 per cent longer distance, makes 183 per cent more round trips, carries 48 per cent more corn, 50 per cent more wheat and 83 per cent more cotton than horse-drawn vehicles."

New Vim Enters the Light Truck Market

With two well equipped plants, 32 acres of ground which will provide ample space for expansion, all past indebtedness wiped out, plenty of new working capital and an executive staff which has taken the success of the organization to heart, the new Vim Motor Truck Co., of Philadelphia, is soon to launch into production on two light truck models, a ½ and a ¾ ton, which now give promise of great popularity among the light-weight commercial car users.

After a somewhat momentous career, in which the depression played a prominent part, the old Vim concern was obsorbed by the Standard Pressed Steel Co., of Pittsburgh. The new Vim is again under its own management, being backed up by a number of reliable Philadelphia manufacturers.

The engineering department has been working on the new model, developing the product with a view to vital problems in successful designing, as serviceability, accessibility, flexibility and strength, with the result that a commercial car has emerged which is radically different from the old Vim. Although a large stock of parts and units remain from the old job, none of this inventory has been used in the new model. The company has solved the problem of depleting the old inventory by assembling a number of old Vims which have found an outlet, during the past few months, through the five Vim branches.

The task of creating a sales organization has been placed in the hands of S. A. Hale, an able executive, who has the commendable ability of coping successfully with dealer problems and bringing the dealer and factory in closer contact. He has, as a nucleus, six factory branches in the following cities: New York, Philadelphia, Chicago, Boston, Providence, R. I., and Los Angeles. From these branches will eminate the subdealers. Mr. Hale is now combing sections of the eastern territory for dealer prospects. He has a number of solicitors out with their trucks literally "under their arms," giving demonstrations and installing dealerships.

Dealers and branch houses are to be extended the same discount. Production and sales are to be so closely linked that it will not be necessary to load the dealer with more vehicles than he can handle in order to keep the stock moving.

M. H. Adams is chief engineer of production. His broad experience in the truck field will help him overcome the difficulties usually encountered by embryo companies. Production plans now call for 6000 a year, the schedule starting with 50 the first month, 75 the second, 125 the third. Production methods will proceed along the most up-to-date lines, the belt conveyor, the Akimoff balancing machine, the piece work system, etc.

E. K. Coneely is president of the new company; August Schneider, vice-president; Frank Thomas, secretary and treasurer, and C. S. Jones, service manager.

The two models now entering production are powered by a heavy-duty type 4 cylinder motor of well-known make, 4 x 5, which is utilized for its speed as well as its power. Wheelbase is 108 in. The truck comes in two body designs, the standard open express body and a standard panel body. Full details of the specifications of the truck will appear in an early issue.

Ratio of Gasoline to Cars Now Lower

The ratio of gasoline stocks to the number of automobiles registered is lower than it has been for several years, according to R. L. Welsh, secretary of the American Petroleum Institute.

The following table gives the situation from 1918 to date:

	Number of Automobiles Registered January 1	Gasoline Stocks End of May	Number of Gallons per Car
1918....	4,983,340	460,637,479	92.4
1919....	6,146,617	594,035,688	96.6
1920....	7,558,848	577,671,795	76.4
1921....	9,211,205	800,495,787	86.9
1922....	10,448,632	856,607,102	82.0
Weighted average 1918-1921....			87.2

The summer demand for gasoline is about double the lowest demand of the winter. In anticipation of the summer demand in the years 1918 to 1921, inclusive, refineries accumulated between January 1 and May 31 an average increase in stocks on hand of twenty-eight gallons of gasoline for each car registered on January 1 of each year. In comparison with this increase for the years referred to, the increase in gasoline stocks from January 1 to May 31, this year, was twenty-six gallons for each automobile registered on January 1, 1922.

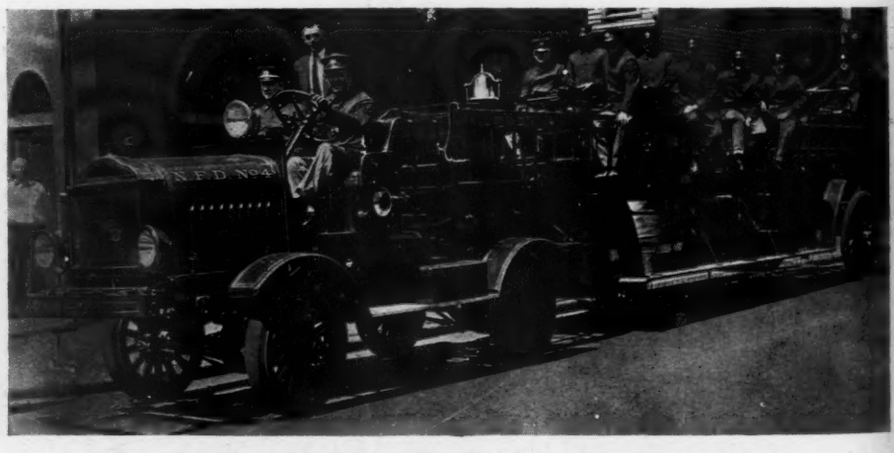
R. L. Welch authorizes the following: Gasoline stocks in comparison with the number of automobiles in use in the United States are slightly lower than they have been in any year since 1918, with the exception of the year 1920, and are lower than the average for the years 1918 to 1921 inclusive. Data compiled by the American Petroleum Institute gives a comparison between the stocks of gasoline available and the consumption of gasoline, as indicated by the number of automobiles in use. The month of May witnessed the greatest production of gasoline and the greatest indicated consumption of gasoline in the history of the oil business. The production of gasoline reached the total of 12,229,975 barrels. The highest production in any month in any previous year was in September, 1920, when 10,806,693 barrels were produced. Despite the record-breaking production in May, 1922, however, gasoline stocks were drawn on to the extent of 849,064 barrels, indicating an unprecedented consumption. The best single index of the demand for gasoline is the number of automobiles in actual use. The amount of gasoline available in refinery storage on May 1, 1922, for each of the 10,448,632 automobiles registered on January 1, 1922, was eighty-two gallons as against an average of eighty-seven gallons for each of the automobiles registered on January 1, for the years 1918 to 1921, inclusive.

Profitable Second Quarter for General Motors

Net earnings of $26,839,391, on the common stock is the preliminary estimate of General Motors Corp., for the first six months of 1922. Net sales for the half year aggregated $218,490,887, of which $137,800,000 were in the second quarter. Net earnings, before Federal taxes and interest charges, were $35,116,481 with $25,970,000 in the second quarter. Net earnings, after all charges, for the six months were $29,997,391. Dividends on the preferred and debenture stock for the six months required $3,158,000.

In the six months ending June 30, approximately $6,200,000 net has been added to reserve for depreciation and the balance in these reserves now stands at $43,700,000.

More motor trucks are used on the farms in the West North-central states than in any other section of the country, according to U. S. Bureau of the Census figures. Minnesota, the Dakotas, Iowa, Missouri, Kansas and Nebraska have 33,000 trucks on farms.



The Advent of the Tractor Truck Solves Another Problem in Motorizing City Fire Departments

One of the two FWD, 105-in. wheelbase tractor trucks recently purchased and consigned to the fire department by the City of Newark, N. J., is shown above. They are used in connection with hook and ladder trucks, which were formerly horse-drawn equipment. The conversion necessitated the removal of the front wheels and the placement of the front end of the bodies on the tractors by means of a fifth wheel.

Boosters' Club Builds Trade Ethics

If you meet a man wearing a small Gothic letter B it indicates he is a Booster, a member of the Boosters' Club, N. E. No. 1. Every member of this club is pledged to—

Raise the level of the automotive industry by boosting the other fellow, keeping his promises, being truthful, inspiring confidence, play clean, having a real policy, being ethical, not misrepresenting and serving the service that serves by giving both manufacturers and jobbers a square deal.

The Boosters was organized by a small group of men in the trade who practiced clean and stable business methods and who have 100 per cent faith in the future of the industry. They believe that the merchandising of automotive equipment, accessories and supplies was a 100 per cent high-grade business and that many of the so-called merchandising problems would naturally be eliminated if everyone selling the trade would become a real booster.

Membership in the Boosters' Club is limited to manufacturers' representatives calling on the trade in New England. It should be explained that the club is the only one of its kind in existence, having been organized in Boston a little over a year ago.

The organization is somewhat exclusive. In the first place one must receive an invitation to join and they are not freely disposed. The applicant must receive the O. K. of the board of directors and his name is bulletined to all members for some time previous to the election. To be elected one must receive a majority favorable vote and have the essential qualities making for a Booster. It follows, therefore, that one may be a real good fellow, and believe in clean business, but the house he represents may not practice Booster methods.

Bulletins and Registers

Members are kept posted by bulletins and official hotels have been appointed at which there is a Booster Register, so that a member may know what other Booster is in the city. The meetings are held the third Monday of each month, are closed but are followed by a dinner and an open meeting to which those in the trade are invited. Formerly held in Boston the meetings are now being held in the leading cities of New England. The August meeting will be at Portland, Me., the object being to co-operate with the jobbers and trade in spreading the Booster movement.

The plans for the Boosters' Club is to encourage and aid the establishment of similar organizations in various sections of the country and later to amalgamate the clubs into a national organization. There is need for more Boosters' Clubs, not only in the lines exploited by the New England association but in other lines in the automotive industry.

Several More Price Reductions Announced

Price changes and new models occupied the center of attention in the truck industry during the past few weeks. It cannot be said that the reductions came as a surprise for some such action had been anticipated during the past three months. A number of passenger car reductions came at the same time which amounted to a paring off in price which in no case did not exceed $300. Truck reductions, too, did not reach the proportions attained in the general reduction of early 1922.

So far the direct effect has been quite small. July was not as good a month from the standpoint of production as June. There seemed to be a general loosening in sales efforts due to the vacation period and the hot days.

Companies making price changes were: Gramm Bernstein Motor Truck Co.,, the Signal Truck Corp., Chevrolet Motor Co., Old Reliable Motor Truck Co., Triangle Motor Truck Co., Patriot Mfg. Co., Reo Motor Car Co., the Oklahoma Auto Mfg. Co., and the International Harvester Co.

N. A. C. C. Organizes Service Campaign

A campaign has been launched by the Service Division of the N. A. C. C. to show the distributors and dealers that the factories approve of the formation and activities of service associations in the cities and other communities serving the owner. Every factory has been asked by Secretary Harry Cobleigh to have its service department attach the paster reproduced herewith to all letters, circulars, etc., sent to their dealers and distributors.

The sticker is about 2 x 3 in, in orange and blue, and calls attention to a free booklet issued by the Service Division. It describes how to form a service association and points out the need of one in every city of consequence. A sample paster, which was changed to that illustrated, was shown at the service convention at Detroit, and the members were in favor of the plan.

Aside from outings the various service associations of the country are not holding meetings during the summer months, but plans are being consummated by the Service Division of the N. A. C. C. to form a number of associations in cities not represented. A speakers' bureau has been organized and associations will be supplied with men connected with parts and equipment makers as well as those prominently identified with service. A number of concerns are having educational films made and these will be shown in connection with the addresses.

Other work planned by Mr. Cobleigh includes co-operation with the Bureau of Education at Washington in arranging a conference of those interested in the education of mechanics. The conference will probably take place in October.

Plans are being laid for the Fall service convention of the factory service men, the date of which will be announced later. A number of interesting subjects, vital to service will be discussed by well qualified speakers. Secretary Cobleigh is planning a trip among the factories prior to the convention and his visits should result in the plants being fully represented.

New England Automotive Jobbers' Club Entertained the Boosters' Club, N. E. No. 1, at the "Hummocks," R. I., July 14th

The annual outing of the New England Automotive Jobbers was attended by jobbers from Boston, Worcester, Springfield, Mass.; Hartford and New Haven, Conn.; and Providence, R. I. Chicago, Washington, Philadelphia, Cleveland, New York and Boston members of the Boosters' Club were also present. There was a bake, athletic games, etc., and the outing was a huge success

Will Continue Cars and Trucks Now Made by Merged Companies

Full capacity production of the National, Jackson Four Wheel Drive, Old Hickory and Traffic Trucks, now manufactured by the companies merged in Associated Motor Industries, has been definitely decided on. The merger also will push to capacity production of the National, Jackson and Dixie Flyer automobiles.

The first meeting of the Board of Directors of Associated Motor Industries adopted the policy of continuing the manufacture of its present cars and trucks. It is announced that the entire effort of the corporation will be devoted at this time to full production of these cars, and to giving them the utmost in increased service and distribution facilities.

Operation in all the plants will be on full capacity and will be pushed as rapidly as possible to a two-shift basis, it was announced after the board meeting, by Chairman Will I. Ohmer.

"All our efforts will be concentrated immediately on giving full service on the cars and trucks we are making now," said Mr. Ohmer in a statement given out after the board meeting. "The owners of these cars will now have all the resources of the entire merger to give them complete service, in a far more extensive and more economical way than would be possible to any single company. The reputation and good-will built up by the National, Jackson and Dixie Flyer cars, and by the Traffic Truck and our other trucks, is of great value and our duty is to take care of the own ers of these cars.

"That being the case, our first task is to put all our strength into the manufacture of the present cars on the most efficient basis. The merger of all the companies into Associated Motor Industries can produce cars and give service far more efficiently and economically than the single manufacturers could. Associated Motor Industries, therefore, does not mean the discontinuance of any of our established cars and trucks. It means new life and growth for them all."

Representatives of all the automobile and parts manufacturers included in Associated Motor Industries met at the first directors' meeting which was called in Chicago, July 18th. Future meetings will be at the corporation's office in Dayton, Ohio. The central organization has been practically completed, and is now directing all operations in the merger from the head offices in Dayton.

Mack Trucks Show Nice Balance

Mack Trucks, Inc., for the quarter ended June 30, 1922, reports net earnings of $1,315,634 after charges, depreciation and Federal taxes. This compares with $523,639 during the same period of 1921.

For the six months ended June 30, 1922, the company earned $1,570,632, as compared with $528,035 for the corresponding period of 1921.

Growth of Earnings Reported for Parish & Bingham

Sales of the Parish & Bingham Corp. for the five months ended May 31, 1922, amount to $1,837,646.97, which represents a greater volume than was recorded for the same period last year. The net earnings on this volume of business show an improvement over the same period last year of $119,408.36, and with business holding at a par continued growth and a materially improved revenue are to be expected.

The company reports its bank loans have been reduced by $160,000 since the first of the year, and now amount to $875,000, as compared with high loan point in January, 1921, at which time these loans were $2,022,500, same having been reduced since that time by $1,147,500. From a liquidation standpoint it is worthy of mention that this company reduced its inventory of practically $2,000,000 at the beginning of the year 1921, to the extent of $1,400,000, carrying today materials for production and incidental thereto the conservative amount of $600,000.

To the list of substantial automobile companies for which production has been made for a number of years, are to be added the orders recently received from Jordan, Durant and Maxwell Motors.

Realizing that considerable volume of pressed steel tonnage is to be had from the railroad field, the management is installing a department to handle this work exclusively, and considerable interest and optimism is displayed, which is substantiated by the inquiries received.

Walker LaFrance to be Manufactured

The Ward LaFrance Truck Corp., of Elmira, N. Y., which was placed in an equity receivership some months ago, has been sold by the receivers. The property was purchased by R. W. Walker, president of Walker Motors, Inc., New York City. The Elmira plant is to be removed to New York, where this line of trucks will be manufactured particularly for the New York market.

The truck will be known as the "Walker LaFrance." It is understood that no radical changes will be made in design or construction, and that the truck will be made very much along the lines of the Ward LaFrance. A. Ward LaFrance, formerly president of the Ward LaFrance Truck Corp., will be associated with Mr. Walker, and in charge of production. It is stated that the purchase in no way has any connection with the American LaFrance Fire Engine Company of Elmira, manufacturers of fire apparatus.

Truck Shipments of Strawberries Bring Better Prices

Farmers 150 miles distant from Detroit are bringing in their strawberries by trucks. Strawberry shipments into the extensive Oregon market are also being made by truck. Growers and commission men generally report that the berries arrive in better condition and bring better prices, when shipped by truck.

University of Michigan Offers Highway Fellowships

In accordance with its annual custom, the Board of Regents of the University of Michigan will announce the awards of two of its Fellowships in Highway Engineering and Highway Transport not later than September 1, 1922, the other two being awarded not later than November 1. The four Fellowships are as follows:

The Roy D. Chapin Fellowship in Highway Transport, which is offered to provide for the investigation of an approved subject relative to Highway Transport.

The Roy D. Chapin Fellowship in Highway Engineering, which is offered to provide for the investigation of an approved subject relative to hard surfaced roads and pavements.

Two Detroit Edison Fellowships in Highway Engineering, which are offered to provide for the investigation of approved subjects relative to moderate cost country roads.

General conditions of the Fellowships are:

Each Fellowship pays the sum of $200 with an allowance of $50 for expenses. The holders of these Fellowships do not have to pay tuition fees. A Fellow must hold a Bachelor's Degree from a college of recognized standing. He must enroll as a graduate student in highway engineering and highway transport and as a candidate for the degree of Master of Science or Master of Science in Engineering. He must be in residence for one of the following periods: First Semester (October to February); Winter Period (December to March); Second Semester (February to June). An application for a Fellowship must include a concise statement of the candidate's educational training and engineering experience, and three references. Applications and requests for information pertaining to the twenty-five advanced courses in Highway Engineering and Highway Transport offered by the Graduate School should be sent to Prof. Arthur H. Blanchard, Engineering Bldg., University of Michigan, Ann Arbor, Mich.

Nash Shows Substantial Earnings

The balance sheet of the Nash Motors Co., Kenosha, Wis., from December 1 to April 30, places earnings for that company at $2,173,000. Earnings for the full fiscal year of 1921 were $2,226,000. The sheet also shows:

Assets: Real estate, plant, equipment, etc., $4,847,828; investments, $2,114,112; Liberty bonds, $1,200,802; materials and supplies, $3,334,388; notes receivable, $527,896; accounts receivable, $2,129,154; cash, $8,204,122; U. S. Treasury certificates and notes, $5,857,588; prepaid expenses, $3,888; total, $28,219,778.

Liabilities: Preferred stock, $4,000,000; common stock, 54,600 shares of no par value, $510,000; accounts payable, $2,710,902; reserve for Federal and other taxes, $3,285,662; other reserves, $2,808,106; surplus, $14,905,108; total, $28,219,778.

Replacement Table—Corrected Monthly

Including Piston Ring Sizes, Carburetor Sizes, Hose Sizes, Fan Belt Sizes, Brake Lining Sizes and Truck Frame Dimensions

Note: Under Carburetor Inlet Diameter Will be Found Either the Size of Main Air Intake or the Gasoline Fuel Line

Fan Belt Type: V—V-Shape, F—Flat, R—Round

Name, Model and Tonnage	ENGINE												BRAKE LINING								FRAME	
	Piston Rings		Carburetor			Upper Hose		Lower Hose		Fan Belt			Service				Emergency				Length	Width
	No. per Cyl.	Width	Outlet Diameter	Inlet Diameter	Vertical or Horizontal	Length	Width	Length	Width	Length	Width	Type	Length	Width	Thickness	No. of Pieces	Length	Width	Thickness	No. of Pieces	Back of Driver's Seat	Over All
Acason R–1	4	¼	1	....	....	....	....	....	....	....	....	....	11½	3	¼	2	11½	3	¼	2	112	34
Acason RB–1½	4	¼	1	....	....	....	....	....	....	....	....	....	11½	3½	¼	2	11½	3½	¼	2	112	34
Acason H–2½	3	¼	1¼	....	....	....	....	....	....	....	....	....	13½	3½	¼	2	13½	3½	¼	2	130	35
Acason –L3½	3	¼	1¼	....	....	....	....	....	....	....	....	....	16	3¾	¼	2	16	3¾	¼	2	163¾	35
Acason M–5	3	¼	1½	....	....	....	....	....	....	....	....	....	18	4½	¼	2	18	4½	¼	2	167½	35
Ace, Series A–1½	3	5/16	1¼	1¼	H	10¾	2¼	6½	2	37½	1	F	12	3¼	¼	4	12	3¼	¼	4	122½	32
Ace, Series A–2½	4	¼	1¼	1¼	V	10¾	2¼	5½	1¼	33	1¼	F	13	3¼	¼	4	13	3¼	¼	4	144½	32
Acme 20–1	3	5/16	1	1	V	11	2	11	2	38¾	¾	V	10½	2½	¼	4	10½	2½	¼	4	110⅜	34
Acme 30–1½	3	5/16	1	1	H	11	2	11	2	38¾	¾	V	12	3¼	¼	4	12	3¼	¼	4	110⅜	34
Acme 40–2	4	¼	1	1	H	8	1½	11½	1½	40	1¼	F	12	3¼	¼	4	12	3¼	¼	4	123⅜	34
Acme 60–3	4	¼	1¼	1¼	H	7	1¼	11	1¼	33¾	¾	V	13	3½	¼	4	13	3½	¼	4	132⅜	34
Acme 60L–3	4	¼	1¼	1¼	H	10	1½	13	1½	33½	1¼	F	13	3½	¼	4	13	3½	¼	4	140 11/16	34
Acme 90–4½	4	¼	1¼	1¼	H	11½	1½	13	1½	33½	1¼	F	15½	3¾	¼	4	15½	3¾	¼	4	150¼	36
Acme 125–6¼	3	¼	1½	1½	H	11	2	11½	2	40½	2	F	18	4	¼	4	18	4	¼	4	159¾	37
American 25–2½	4	¼	5/16	1¼	V	19	1¾	17	1½	38	2	F	19	2¼	¼	4	19	2¼	¼	4	142	33
American 40–4	4	¼	5/16	1¼	V	19	1¾	9½	1¾	38	2	F	57	2½	5/16	2	41½	2½	5/16	2	142	37
American 50–5	4	1¼	5/16	1¼	V	19	1¾	9½	1¾	38	2	F	....	....	....	....	....	....	....	....	158	37
Apex C–1	3	5/16	1	1	V	7¼	2	12	2	36½	⅞	....	42	2	....	2	41½	2	....	2	102	35½
Apex D–1½	3	5/16	1	1	V	7¾	2	12	2	36½	⅞	....	42	2	....	2	41½	2	....	2	102	35½
Apex E–2½	4	¼	1	1¼	V	7½	1¼	8	2	32	1	....	54	2¼	....	2	53½	2	....	2	128	31½
Apex G	3	5/16	1	1	V	12	2	15½	2	34½	⅞	....	24	2	....	2	41½	2	....	2	102	35½
Armleder 21–1½	4	¼	1	5/16	V	12	1¾	16½	1¼	31½	2	F	11½	3¼	¼	4	11½	3¼	¼	4	Opt	32
Armleder 40B–1½	4	¼	1¼	5/16	V	9½	2	11½	1¼	33¼	2	F	13¼	3½	¼	4	11½	3½	¼	4	Opt	32
Armleder 40C–1½	3	5/16	1¼	5/16	V	10	1½	11½	1¼	35	1¼	F	13¼	3½	¼	4	11½	3½	¼	4	Opt	32
Armleder KW–3½	4	¼	1¼	5/16	V	12	2	16½	1¼	35¾	2	F	42	3	5/16	1	16	3¾	¼	8	Opt	36
Armleder KWC–3½	3	5/16	1¼	5/16	V	10	1½	16½	1¼	35¾	2	F	42	3	5/16	1	16	3¾	¼	8	Opt	36
Armleder HWB–2½	4	¼	1¼	5/16	V	9½	2	11½	1¼	33¼	2	F	13¼	3½	¼	4	13¼	3½	¼	4	Opt	32
Armleder HWC–2½	4	5/16	1¼	5/16	V	10	1½	11½	1¼	35	1¼	F	13¼	3½	¼	4	13¼	3½	¼	4	Opt	32
Atco B–1½	4	¼	1	1	V	11	2	11	1¼	31½	2	F	25½	2½	5/16	4	18	2½	5/16	4	109¾	32
Atco B1–1½	4	¼	1	1	V	11	2	11	1¼	31½	2	F	46	2½	5/16	2	46	2¼	5/16	2	109¾	32
Atco A–2½	4	¼	1¼	1¼	V	12	2	11	1¼	33¼	1¼	F	25½	2½	5/16	4	18	2½	5/16	4	124¼	33
Atlas 21–1	3	5/16	1¼	¼	H	9	2¼	14½	2¼	31½	1	F	40	2¼	1 1/16	1	22½	2¼	¼	1	84¾	33¼
Atterbury 20R–1½	4	5/16	1	3/8	....	8	1½	14	1½	38 11/16	1¼	F	11 1/16	3¼	¼	4	11 1/16	3¼	¼	4	122 1/16	34
Atterbury 7CX–2½	3	5/16	1¼	3/8	....	5¾	1¼	6¾	1¼	30¼	1¼	F	13 1/16	3½	¼	4	13 1/16	3½	¼	4	133 3/16	34
Atterbury 7D–3½	3	5/16	1¼	3/8	....	8	1½	6	1¼	30¼	1¼	F	15 5/16	3¾	¼	4	15 5/16	3¾	¼	4	145 3/16	37½
Atterbury 8E–5	3	¼	1½	3/8	....	14	2	20½	2	40	2	F	17¾	4	¼	4	17¾	4	¼	4	157⅞	37½
Autocar XXI–F–2	4	5/16	1 1/16	....	....	3	1 1/8	4	1 1/8	....	....	....	16¼	2½	5/16	4	13	2½	5/16	4	91	34
Autocar XXI–G–2	4	5/16	1 1/16	....	....	3	1 1/8	4	1 1/8	....	....	....	....	2½	5/16	4	13	2½	5/16	4	114	34
Autocar XXVI–Y4	3	¼	1 1/16	....	....	3½	1½	3	1½	48¾	1½	F	25½	2¾	¼	4	25½	2¾	¼	4	121	34 1/16
Autocar XXVI–B4	3	¼	1 1/16	....	....	3½	1½	3	1½	48¾	1½	F	25¼	2¾	¼	4	25½	2¾	¼	4	176	34 1/16
Available H–1½	4	5/16	2¼	1 1/16	....	11	1 5/8	14	1 5/8	40	2	....	48	2½	¼	2	36	2½	¼	2	120	32
Available H–2½	3	5/16	2¼	1 1/16	....	11	1 5/8	14	1 5/8	40	2	....	13½	3½	¼	4	13½	3½	¼	4	144	32
Available H3	3	5/16	2½	1 1/16	....	11	1 5/8	14	1 5/8	42	2	....	16	3¾	¼	4	16	3¾	¼	4	168	36
Available H5	3	¼	2½	1 1/16	....	12	2	16	2	40	2	....	18	4	¼	4	18	4	¼	4	168	38
Available H2	4	5/16	2¼	1 1/16	V	12	1 5/8	14	1 5/8	40	2	F	48	2½	¼	2	36	2½	¼	2	120	32
Available H2½	4	5/16	2¼	1 1/16	V	12	1 5/8	14	1 5/8	40	2	F	13½	3½	¼	4	13½	3½	¼	4	144	32
Available H3½	4	5/16	2½	1 1/16	V	12	1 5/8	14	1 5/8	42	2	F	16	3¾	¼	4	16	3¾	¼	4	168	36
Available H5	4	¼	2½	1 1/16	V	12	2	16	2	40	2	F	18	4	¼	4	18	4	¼	4	168	38
Avery 1	3	5/16	....	1	....	10	2	6½	2	31¾	1½	F	19½	2	5/16	4	18½	2	5/16	4	85	34
Bell M–1	4	5/16	1	5/16	V	10	2	10	1½	32	2	F	36	2½	5/16	1	42	3	¼	1	110	34
Bell E–1½	4	5/16	1	5/16	V	10	2	10	1½	32	2	F	39	2½	5/16	1	48	3	¼	1	114	34
Bell O–2½	4	5/16	1¼	5/16	V	10	2	10	1½	32	2	F	48	2½	5/16	1	54	3	¼	1	126	34
Bessemer G–1	3	5/16	1	5/16	V	11½	2¼	10	2¼	42	⅝	V	47½	2½	5/16	2	45½	2¼	5/16	2	98¼	34
Bessemer H–2–1½	3	5/16	1	5/16	V	11½	2¼	10	2¼	43	⅝	V	56½	2½	5/16	2	55	2¼	5/16	2	116	34
Bessemer J2–2½	3	5/16	1¼	5/16	V	12	1½	5	1⅞	36¼	1¼	F	56½	2½	5/16	2	55	2½	5/16	2	142⅜	34
Bessemer K2–4	3	5/16	1¼	5/16	V	11½	2¼	10	2¼	39⅜	1½	F	58½	3½	5/16	2	30¼	4½	5/16	1	157½	38
Brinton C–1½	3	5/16	1 1/16	3/8	....	11	1¼	13	1¼	33	11/16	F	39	2½	5/16	1	38	2½	5/16	1	118	33
Brinton D–2½	3	5/16	1 1/16	3/8	....	11	1¼	13	1¼	33	11/16	F	13	3½	¼	2	13	3½	¼	2	135½	33
Brockway S2–1½	3	5/16	1	....	V	10½	2¼	5½	2¼	39	1¼	F	20	2	5/16	4	20	2	5/16	4	118	32
Brockway K4–2½	3	5/16	1¼	....	V	6½	1¾	13	1¼	34	1¼	F	12	3⅜	5/16	4	12	3⅜	5/16	4	142	34
Brockway R–2–3½	3	5/16	1¼	....	V	9½	1¾	14	1¼	34	1½	F	15⅝	3¾	5/16	4	15⅝	3¾	5/16	4	176	36
Brockway T–5	3	¼	1½	....	V	13	2	22	2	40⅜	2	F	18	4	5/16	4	18	4	5/16	4	176	36
Buffalo Tractor-Truck	4	5/16	1¼	5/16	V	7	1⅝	13	1⅝	41½	2	F	21	2¼	¼	4	21	2¼	¼	4	124	34
Case	3	¼	1 1/16	1 11/16	V	7	1½	6	1½	47⅛	2	....	25½	2½	¼	4	24¼	2¼	¼	4	106	31
Chicago C–1½	4	....	1	1½	....	....	....	....	....	40	2	....	12⅛	3¼	¼	4	12⅛	3¼	¼	4	123	32
Chicago C–2½	4	....	1¼	1¾	....	....	....	....	....	40	2	....	13¾	3½	¼	4	13¾	3½	¼	4	135	32
Chicago C–3½	4	....	1¼	1¾	....	....	....	....	....	46	2	....	16	3¾	¼	4	16	3¾	¼	4	180	36¼
Chicago D–5	4	....	1¾	1¾	....	....	....	....	....	46	2	....	18	4	¼	4	18	4	¼	4	180	36¼
Climber A–20	3	....	1	1¼	H	....	....	....	....	32	1	....	16	2¼	¼	2	16	2⅛	5/16	1	120	34
Clydesdale 120B–5–6	3	¼	1 1/16	5/16	V	9	2	18½	2	46½	2	F	18	4	¼	4	18	4	¼	4	131	38
Clydesdale 90–3½–4½	3	5/16	1 5/16	5/16	V	9	1½	14	1½	42	1½	F	16	3¾	¼	4	16	3¾	¼	4	143	38
Clydesdale 65EX 2½–3	3	5/16	1 5/16	5/16	V	9	1½	14	1½	42	1½	F	13¼	3½	¼	4	13¼	3½	¼	4	132	33¼
Clydesdale 65X–2½–3	3	5/16	1 1/16	5/16	V	11	1½	11	1½	40	1½	F	13¼	3½	¼	4	13¼	3½	¼	4	137	33¼
Clydesdale 42–1½–2	3	5/16	1 1/16	5/16	V	15	2	12	2	41	¾	V	12	3¼	¼	4	12	3¼	¼	4	117	34
Clydesdale 20–1–1½	3	5/16	1 1/16	5/16	V	15	2	12	2	41	¾	V	11¼	3	¼	4	11¼	3	¼	4	100	34
Clydesdale 18–¾–1¼	3	5/16	1 1/16	5/16	V	15	2	12	2	41	¾	V	11¼	2½	¼	4	11¼	2½	¼	4	95	34
Clydesdale 10–¾–1¼	3	5/16	1 1/16	5/16	V	9	2	9	2	41	¾	V	11¼	2½	¼	4	11¼	2½	¼	4	109	34
Clydesdale 10A–1	3	5/16	1 1/16	5/16	V	9	2	9	2	41	¾	V	11¼	2½	¼	4	11¼	2½	¼	4	100	34

Replacement Table—Continued

Name, Model and Tonnage	ENGINE											BRAKE LINING								FRAME	
	Piston Rings		Carburetor			Upper Hose		Lower Hose		Fan Belt			Service				Emergency				Length	Width
	No. per Cyl.	Width	Outlet Diameter	Inlet Diameter	Vertical or Horizontal	Length	Width	Length	Width	Length	Width	Type	Length	Width	Thickness	No. of Pieces	Length	Width	Thickness	No. of Pieces	Back of Driver's Seat	Over All
Collier 18–1	3	1/4	1	....	V	9 3/4	2	10 1/2	1 1/4	40	1	F	24	3 1/2	1/4	4	24	3 1/2	1/4	4	106	35 1/4
Collier 19–1½	3	1/4	1	....	V	9 3/4	2	10 1/2	1 1/4	40	1	F	24	3 1/2	1/4	4	24	3 1/2	1/4	4	120	32
Collier 21–2	3	1/4	1 1/2	....	V	6	1 1/2	10 1/2	1 1/4	40	1	F	27 1/2	3 1/2	1/4	4	27 1/2	3 1/2	1/4	4	132	32
Collier 22–2½	3	1/4	1 1/2	....	V	6	1 1/2	10 1/2	1 1/4	40	1	F	27 1/2	3 1/2	1/4	4	27 1/2	3 1/2	1/4	4	144	32
Commerce T–1500	3	1/4	1	1/4	V	10	2	10	2	44	3/4	V	50	2	1/4	2	48 1/2	2	1/4	2	92 5/8	34
Commerce 12–3000	3	1/4	1	1/4	V	10	2	10	2	44	3/4	V	45	2 1/2	1/4	2	43	2 1/4	1/4	2	99 5/8	34
Commerce 16–4000	3	1/4	1	1/4	V	10	2	10	2	44	3/4	V	50 3/4	2 1/2	1/4	2	48	2 1/4	1/4	2	108 5/8	34
Commerce 18–5000	3	1/4	1 1/4	1/4	V	6	1 1/2	11	1 1/2	33	1 1/4	F	50 3/4	2 1/2	1/4	2	48	2 1/4	1/4	2	128 5/8	34
Concord A–2	4	1/4	1 1/4	1/4	H	11	2 3/8	9 1/2	1 1/2	34	2	F	12	3 1/4	1/4	4	12	3 1/4	1/4	4	108 1/4	32 1/4
Concord AX–2	4	1/4	1 1/4	1/4	H	11	2 3/8	9 1/2	1 1/2	34	2	F	12	3 1/4	1/4	4	12	3 1/4	1/4	4	122 3/4	32 1/4
Concord B–3	4	1/4	1 1/4	1/4	H	11	2 3/8	9 1/2	1 1/2	34	2	F	13 1/2	3 1/2	1/4	4	13 1/2	3 1/2	1/4	4	122 1/2	32 1/4
Concord BX–3	4	1/4	1 1/4	1/4	H	11	2 3/8	9 1/2	1 1/2	34	2	F	13 1/2	3 1/2	1/4	4	13 1/2	3 1/2	1/4	4	155 5/8	32 1/4
Corbitt E–1	3	1/4	1	1/4	....	8	2	14	2	38	5/8	V	19	2	1/4	2	19	2	1/4	2	105	34
Corbitt D–1½	3	1/4	1 1/4	1/4	....	8	2	14	2	38	5/8	V	45 1/4	2	1/4	1	45 1/4	2	1/4	1	120	34
Corbitt C–2	3	1/4	1 1/4	1/4	....	14	1 1/4	13	1 1/4	36	1 1/4	F	51 1/2	2 1/4	1/4	1	51 1/2	2 1/4	1/4	1	138	35
Corbitt B–2½	3	1/4	1 1/4	1/4	....	14	1 1/4	13	1 1/4	36	1 1/4	F	51 1/2	2 1/4	1/4	1	51 1/2	2 1/4	1/4	1	138	35
Corbitt AA–5	3	1/4	1 1/2	1/4	....	13	1 1/4	8	1 1/4	36	2	V	69 1/4	3	1/4	1	69 1/4	3	1/4	1	160	38
Corbitt A–3½	3	1/4	1 1/4	1/4	....	13	2	14	2	36	1 1/4	V	64	2 1/2	1/4	1	64	2 1/2	1/4	1	160	35
Cyclone A–3000	3	1/4	1	1	V	16	2	16	2	32 1/2	1 1/4	F	21 1/4	2 1/2	1/4	4	19 3/4	2 1/4	1/4	4	113	34
Dart S–1½	3	1/4	1 1/4	1 1/4	H	11	2	8	1 3/4	36	1	F	19	1 3/4	1/4	4	19	1 3/4	1/4	4	112	34
Dart M–2½	4	1/4	1 1/4	1 1/4	H	11	2	13	1 1/4	35	2	F	10	2 1/2	1/4	2	19	3 1/2	1/4	4	124	34
Dart W–3½	4	1/4	1 1/2	2	H	11	2	12	1 1/2	36	2	F	28	2 3/4	1/4	4	28	2 3/4	1/4	4	144	38
Day-Elder AS–1	3	1/4	1 1/4	1 1/4	V	9	2	9 1/2	2	40	5/8	V	19	2	1/4	4	19	2	1/4	4	108	35
Day-Elder B–1½	3	1/4	1 1/4	1 1/2	V	9	2	9 1/2	2	40	5/8	V	19	2	1/4	4	19	2	1/4	4	120	35
Day-Elder D–2	3	1/4	1 1/4	1 1/2	V	4	4	9	1 3/8	35	5/8	V	45	2	1/4	2	45	2	1/4	2	125	35
Day-Elder C–2½	3	1/4	1 1/4	1 1/2	V	10 1/2	2	12	1 3/8	36 3/4	2	F	52	2 1/4	1/4	2	52	2 1/4	1/4	2	123	35
Day-Elder F–3½	3	1/4	1 1/2	1 3/4	V	6 3/4	1 3/4	12	1 1/4	35 1/4	1 1/2	F	56 1/2	2 1/2	1/4	2	56 1/2	2 1/2	1/4	2	148	35
Day-Elder E–5	4	1/4	1 1/2	1 3/4	V	12 1/2	2	10	1 3/8	38 1/2	1 1/2	F	69	3	1/4	2	69	3	1/4	2	155	37
Dearborn BW–2	3	....	1	....	....	8 3/4	2	6	1 3/4	37	1	F	18	2 1/2	1/4	2	18	1 1/2	1/4	2	130	32
Dearborn F–1½	3	....	1	....	....	12	2	8	1 3/4	37	1	F	16 1/2	2 1/2	1/4	2	16 1/2	1 1/2	1/4	2	96 1/2	34
Dearborn C–1	3	....	3/4	....	....	....	....	....	....	....	....	....	38	2	1/4	1	38	2	1/4	1	107	32
Defiance B–1½	3	....	1	1	V	10	2	8	2	40 3/4	1 1/4	F	45	2 1/2	1/4	1	43 1/4	2 1/4	1/4	1	116	34
Defiance C–2	3	1/4	1	1	V	10	2	8	2	40 3/4	1 1/4	F	54 1/16	2 1/2	1/4	1	52 1/2	2 1/4	1/4	1	116	34
Defiance D	3	1/4	1	1	V	10	2	8 1/2	1 1/4	40 3/4	1 1/4	F	45	2 1/2	1/4	1	43 1/4	2 1/4	1/4	1	120	34
Defiance E	3	1/4	1	1	V	10	2	8 1/2	1 1/4	40 3/4	1 1/4	F	54 1/16	2 1/2	1/4	1	52 1/2	2 1/4	1/4	1	120	34
Denby 31–¾	3	1/4	1	1	....	6	2 3/8	19	2 3/8	38 5/8	1 1/4	F	49	2 1/2	1/4	2	47 1/2	2 1/4	1/4	2	97 5/8	34
Denby 33–1½	3	1/4	1	1	....	9	2	12	2	41 1/16	3/4	V	8 1/2	4	1/4	2	46 1/2	1 1/2	1/4	2	120	33 1/4
Denby 34	3	1/4	1	1	....	9	2	12	2	41 1/16	3/4	V	53 1/16	3	1/4	2	50 11/16	2	1/4	2	127	34
Denby 35–2½	3	1/4	1 1/4	1 1/4	....	8	2	14 1/4	1 1/4	34 1/4	1 1/4	F	8 1/2	4	1/4	2	51	3	1/4	2	143 3/4	33 1/4
Denby 27–4	3	1/4	1 1/4	1 1/4	....	13	1 3/4	16 1/4	1 1/4	38 1/2	1 1/2	F	8 1/2	4	1/4	2	58	2 1/2	1/4	2	140	34
Denby 210–5	3	1/4	1 1/4	1 1/4	....	13	1 3/4	16 1/4	1 1/4	38 1/2	1 1/2	F	8 1/2	4	1/4	2	89	2 1/4	1/4	2	140	34
Dependable Dispatch A-1¼	4	1/4	1	1/4	V	14	2 1/4	15	1 1/4	37 1/2	2	F	53 1/4	2 1/4	1/4	1	38 1/4	2 1/4	1/4	1	108	33 1/2
Dependable C–2	4	1/4	1	1/4	V	14	2 1/4	15	1 1/4	37 1/2	2	F	53 1/2	2 1/2	1/4	1	38 1/2	2 1/2	1/4	1	121	33
Dependable D–2½	4	1/4	1 1/4	1/4	V	10	2 1/4	11 1/2	1 1/4	37 1/2	2	F	53 1/2	2 1/2	1/4	1	38 1/2	2 1/2	1/4	1	140	33
Dependable E–3	4	1/4	1 1/4	1/4	V	10	2 1/4	11 1/2	1 1/4	37 1/2	2	F	63	2 1/2	1/4	1	49	2 1/2	1/4	1	152	33
Dependable G–3½	4	1/4	1 1/4	1/4	V	13	2	13	1 1/4	37 1/2	2	F	63	2 1/2	1/4	1	49	2 1/2	1/4	1	170	33
Diamond T–O–3–1¼	3	1/4	1	1 1/4	V	9	1 1/4	6	1 1/4	35	2	F	48	2 1/2	1/4	2	33	2 1/2	1/4	2	100	34
Diamond T–FS&T–1½	3	1/4	1	1 1/4	V	9	1 1/4	6	1 1/4	35	2	F	11 1/2	3 1/4	1/4	4	11 1/2	3 1/2	1/4	4	Opt	34
Diamond T–U–2–2½	3	1/4	1 1/4	1 1/4	V	9	1 1/4	6	1 1/4	35	2	F	13 1/4	3 1/2	1/4	4	13 1/4	3 1/2	1/4	4	Opt	34
Diamond TK–3½	3	1/4	1 1/4	1 1/2	V	10	1 1/2	10	1 1/2	35	2	F	15 5/8	3 3/4	1/4	4	15 5/8	3 3/4	1/4	4	Opt	37
Diamond T–EL–5	3	1/4	1 1/4	1 1/2	V	10	1 1/2	10	1 1/2	35	2	F	18	4	1/4	4	17 11/16	4	1/4	4	Opt	37
Diamond T–S–5	3	3/4	1 1/2	1 3/4	V	9	2	21	2	40 5/8	2	F	18	4	1/4	4	17 11/16	4	1/4	4	Opt	37
Diehl A	3	....	1	....	....	....	....	....	....	....	....	....	28	2 1/2	1/4	2	27	2	1/4	2	90	....
Dodge Brothers–¾	3	1/4	1 1/8	3/4	V	9	1 1/2	7 1/4	1 1/16	34 1/2	1	R	19 1/4	2 1/4	1/4	4	14 3/8	1 3/4	1/4	4	47 3/8	38
D–Olt	3	1/4	1	1/4	H	18	2	18	2	36	1	F	54	3	1/4	2	42	3	1/4	2	240	34
Dorris K–4–2½	3	1/4	1 1/4	1 1/4	V	2 1/4	1 1/2	6 1/4	1 1/4	42 7/8	2	F	13 1/2	3 1/2	1/4	4	13 1/2	3 1/2	1/4	4	142 3/4	34
Dorris K7–3½	3	1/4	1 1/4	1 1/4	V	2 1/4	1 1/2	6 1/4	1 1/4	42 7/8	2	F	15 3/4	3 3/4	1/4	4	15 3/4	3 3/4	1/4	4	178 1/2	36
Double Drive B3	4	1/4	1 1/4	1 3/4	....	....	....	....	....	....	....	....	29	2 1/4	1/4	1	29	2 1/4	1/4	1	124	36
Douglas GW–1½	3	....	1 1/4	1/4	....	....	....	....	....	....	....	....	45	2 1/2	1/4	2	44	2 1/4	1/4	2	118	31
Douglas G–1½	3	....	1 1/4	1/4	....	....	....	....	....	....	....	....	46	2 1/2	1/4	2	44	2 1/4	1/4	2	118	31
Douglas H–2	3	....	1 1/4	1/4	....	....	....	....	....	....	....	....	55	2 1/2	1/4	2	52	2 1/4	1/4	2	118	31
Douglas HW–2	3	....	1 1/4	1/4	....	....	....	....	....	....	....	....	54	2 1/2	1/4	2	42	2 1/4	1/4	2	118	31
Douglas I–3	3	....	1 1/4	1/4	....	....	....	....	....	....	....	....	58	2 1/2	1/4	2	44	2 1/4	1/4	2	132	31
Drake T–60	3	1/4	1 1/4	1 1/2	V	9	1 1/2	8	1 1/4	32	1 1/4	F	42 1/4	2 1/2	1/4	1	37	2 1/2	1/4	1	106	34
Duplex E–3½	3	1/4	1 1/4	1	....	....	....	....	....	....	....	....	9 1/2	2 1/2	1/4	2	5 1/2	2 1/2	1/4	2	126	39 1/4
Duplex A	....	....	1 1/4	1 1/2	....	....	....	....	....	....	....	....	....	2	....	4	....	2	....	4	121	34
Eagle 100–2	4	1/4	1 1/4	1	V	14	2	16	1 1/4	33 3/8	2	....	49 1/2	3	1/4	1	46	2	1/4	1	Opt	36
Eugol 752–1	3	1/4	1 3/4	1/8	V	8	1 3/4	15 1/2	1 1/4	32 3/4	1 1/2	F	11	2 1/2	1/4	2	11	2 1/2	1/4	2	102	30
Fageol 1½–2	3	1/4	1 1/4	1 1/2	V	15 1/2	1 1/4	11 1/2	1 1/4	31	5/8	V	19 1/4	1 3/4	1/4	2	19 1/4	1 3/4	1/4	2	120	30
Fageol 2½–3	3	1/4	1 1/4	1 1/16	V	10	1 1/4	14 3/4	1 1/4	34 3/4	1 1/2	F	13 1/4	3 1/2	1/4	2	13 1/4	3 1/4	1/4	2	141	34
Fageol 3½–4	3	1/4	1 5/8	2	V	9	1 1/2	17 1/2	1 1/2	40 1/2	1 1/2	F	15 1/2	3 3/4	1/4	2	15 1/2	3 3/4	1/4	2	159 1/2	37 1/4
Fageol 5–6	3	1/4	1 5/8	2	V	9	1 1/2	17 1/2	1 1/2	40 1/2	1 1/2	F	18	4	1/4	2	18	4	1/4	2	161 1/4	37 1/4
Fargo O17, P18–2, P19–2, P20–2	3	1/16	....	1 1/8	....	10	2	10	2	42	5/8	V	52	2	1/4	2	50 1/2	2	1/4	2	132	33
Fargo R	3	1/16	....	1 1/8	....	10	2	10	2	42	5/8	V	52	3	1/4	2	50 1/2	2	1/4	2	132	33
Federal R–2	4	1/16	1	1 1/16	V	15	1 1/2	7	1 1/2	35 3/8	1	F	10 11/16	2 1/2	1/4	4	10 11/16	2 1/2	1/4	4	110	34
Federal SD–1½	4	1/16	1	1 1/16	V	15	1 1/2	7	1 1/2	35 5/8	1	F	10 11/16	3	1/4	4	10 11/16	3	1/4	4	112	34
Federal TE–2	3	1/16	1 1/4	1 1/2	V	7	1 1/4	6	1 1/2	32 1/2	1	F	13 1/16	3 1/2	1/4	4	13 1/16	3 1/2	1/4	4	118	34
Federal UE–2½	3	1/16	1 1/4	1 1/2	V	7	1 1/4	6	1 1/2	32 1/2	1	F	13 1/16	3 1/2	1/4	4	13 1/16	3 1/2	1/4	4	134	34
Federal WE–3½–4	3	1/16	1 1/4	1 1/2	V	12 1/2	1 1/4	9	1 3/4	39	1 1/2	F	15 5/8	3 3/4	1/4	4	15 5/8	3 3/4	1/4	4	154	38
Federal X–2–5–6	4	1/4	1 11/16	2	V	10	2	14 1/16	1 7/8	40 7/8	1 3/4	F	17 11/16	4	1/4	4	17 11/16	4	1/4	4	154	38
Federal Light Duty	3	1/16	1 1/4	1 1/2	V	7	1 1/4	6	1 1/2	32 1/2	1	F	13 1/16	3 1/2	1/4	4	13 1/16	3 1/2	1/4	4	86	34
Federal Heavy Duty	3	1/16	1 1/4	1 1/2	V	12 1/2	1 1/4	9	1 3/4	39	1 1/2	F	15 5/8	3 3/4	1/4	4	15 5/8	3 3/4	1/4	4	82	38
Ford T–1	3	1/4	1.06	1 1/16	H	4	2	.....	1 3/4	27	1 1/8	F	23 3/8	1 1/8	1/16	1	12	1 1/8	1/16	2	60	23
Front Drive C–1½	4	1/16	1	1 1/2	....	....	....	....	....	....	....	....	13	3	1/4	2	15	3	1/4	2	124	36
F. W. D. B–3	3	1/4	1 11/16	1/16	....	4	2	5	1 1/2	40	1 1/8	F	27	3 1/2	1/4	1	43	2 3/4	1/4	2	136	36
Garford 15–1	4	1/16	1	....	V	....	....	....	....	34	1 1/2	F	11	2 1/2	1/4	4	11	2 1/2	1/4	4	96	34
Garford 25B–1½	3	1/16	1 1/4	....	H	....	....	....	....	37 1/16	1	F	11 3/4	3 1/4	1/4	4	11 3/4	3 1/4	1/4	4	108	34
Garford 70H–2½	4	1/4	1 1/4	....	V	....	....	....	....	34 1/16	2	F	13 1/16	3 1/2	1/4	4	13 1/16	3 1/2	1/4	4	121	34
Garford 77D–4	4	1/4	1 1/4	....	V	....	....	....	....	39	2	F	15 5/8	3 3/4	1/4	4	15 5/8	3 3/4	1/4	4	144	36
Garford 68D–5	4	1/4	1 1/2	....	V	....	....	....	....	41 1/16	2	F	17 3/4	4	1/4	4	17 3/4	4	1/4	4	150	36
Garford 150–A–7½	4	1/4	1 1/2	....	V	....	....	....	....	41 1/16	2	F	10 1/2	4	5/16	2	21 5/8	4	1/4	4	150	36
Gary F–1–1½	4	1/4	1 1/4	5/8	....	....	....	....	....	....	....	....	11	3	1/4	2	11	3	1/4	4	97 3/16	34
Gary I–2	4	1/4	1 1/4	5/8	....	....	....	....	....	....	....	....	12	3 1/4	1/4	4	12	3 1/4	1/4	4	120	34
Gary J–2½	4	1/4	1 1/4	5/8	....	....	....	....	....	....	....	....	13 1/2	3 1/2	1/4	4	13 1/2	3 1/2	1/4	4	120	34
Gary K–3½	4	1/4	1 1/4	5/8	....	....	....	....	....	....	....	....	15	3 3/4	1/4	4	15	3 3/4	1/4	4	148	36 1/4
Gary M–5	4	1/4	1 1/2	5/8	....	....	....	....	....	....	....	....	18 1/4	4	1/4	4	18 1/4	4	1/4	4	168	39
Gersix K–2½	4	1/4	1 1/4	1 1/4	H	12	2	14	1 1/4	36	2	....	20	2 1/2	1/4	4	47	2 1/4	1/4	4	131	34
Gersix M–1½	4	1/4	1 1/4	1 1/4	H	12	2	14	1 1/4	36	2	....	46	2	1/4	2	46	2	1/4	2	114	32
Gersix L–3½	4	1/4	1 1/4	1 1/4	H	13 1/2	2	16	1 1/4	36	2	....	56	2 1/2	1/4	2	56	2 1/2	1/4	2	144	36 1/2

Replacement Table—Continued

Name, Model and Tonnage	ENGINE												BRAKE LINING								FRAME	
	Piston Rings		Carburetor			Upper Hose		Lower Hose		Fan Belt			Service				Emergency				Length	Width
	No. per Cyl.	Width	Outlet Diameter	Inlet Diameter	Vertical or Horizontal	Length	Width	Length	Width	Length	Width	Type	Length	Width	Thickness	No. of Pieces	Length	Width	Thickness	No. of Pieces	Back of Driver's Seat	Over All
Giant 15A–1½	3	1/8	1										11¾	3¼	¼	8	11¾	3¼	¼	8	116½	32
Giant 16–2½	3	1/8	1¼										13 1/8	3½	¼	8	13 1/8	3½	¼	8	140½	33
Giant 17–3½	3	1/8	1½										15 5/8	3 1/8	¼	8	15 5/8	3 1/8	¼	8	183½	36
G.M.C. K–15	4	1/8	1¼	1 5/8	V	8¾	1½	8 1/16	1½	35 5/8	11/16	V	49 5/8	2 1/8	1/16	2	47	2 1/8	1/16	2	89	34
G.M.C. K–16	4	1/8	1¼	1 5/8	V	8¾	1½	8 1/16	1½	35 5/8	11/16	V	49 5/8	2 1/8	1/16	2	47	2 1/8	1/16	2	89	34
G.M.C. K–20	4	1/8	1¼	1 5/8	V	10	1¾	9½	1¾	37 7/8	11/16	V	49 5/8	2 1/8	1/16	2	47	2 1/8	1/16	2	191	33
G.M.C. K–41	4	1/4	1¼	1 5/8	V	10	1¾	9½	1¾	37 7/8	11/16	V	49 5/8	2 1/8	1/16	2	47	2 1/8	1/16	2	191	33
G.M.C. K–71	4	1/4	1¼	1 5/8	V	10	1¾	9½	1¾	37 7/8	11/16	V	13	3½	¼	4	13	3½	¼	4	Opt	33
G.M.C. K–101	4	1/4	1¼	1 5/8	V	11¾	1¾	9½	1¾	37 7/8	11/16	V	15½	3¾	¼	4	15½	3¾	¼	4	Opt	33
Gramm-Pioneer 10 Speed	3	1/8	1	1½	V	11¾	1¾	9½	1¾	37 7/8	11/16	V	17¾	4	¼	4	17¾	4	¼	4	Opt	38
Gramm-Pioneer 15–1½	3	1/8	1	1½	V	12	2¼	14½	2¼	29	1		48	2	1/16	2	26	2	1/16	1	97	30½
Gramm-Pioneer 65–1½	3	1/8	1	1½	V	10¼	2	6	2	39	1¼	F	48½	2	1/16	2	45 7/8	1½	1/16	2	120	32
Gramm-Pioneer 20–2	3	1/8	1¼	1½	V	10¼	2	6	2	39	1¼	F	19¾	1¾	1/16	4	19¾	1¾	1/16	4	120	32
Gramm-Pioneer 30–3	3	1/4	1¼	1½	V	4½	1½	12	1½	32	2	F	45	2	1/16	4	45	2	1/16	4	126	32
Gramm-Pioneer 75P–3½	3	1/4	1¼	1½	V	11	11½	9	1½	33¾	2		22¾	2¼	1/4	4	22¾	2¼	1/4	4	129¾	36
Gramm–Pioneer 40–4	3	1/4	1¼	1½	V	11	1½	9	1½	33¾	2	F	22¾	2¼	1/4	4	22¾	2¼	1/4	4	129¾	36
Gramm–Pioneer 50–5–6	3	1/4	1½	1¾	V	23¼	2	13¾	1 7/8	40¾	2	F	28¾	2¾	1/4	4	28¾	2¾	1/4	4	144	36
G. W. W.	3	1/4	1¼	1¾	V	12	1¾	11	1¾	37	2	F	28¾	2¾	1/4	4	28¾	2¾	1/4	4	132	36
Hall 2-Worm–2½	3	1/8				8	1¼	12½	1¼	32	1¼	F	32M	2¾	1/4	4	32 11/16	2¾	1/4	4	144	38
Hall 3½-Worm	3	1/8				12½	1¾	15½	1¼	38 1/8	1½	F	49	2½	1/4	2	47	1½	1/16	2	89	32
Hall 5-Worm	3	1/8				12½	1¾	15½	1¼	38 1/8	1½	F	11½	3	1/4	4	11½	3	1/4	4	144	38
Hall 7-Chain	3	1/8				12½	1¾	15½	1¼	38 1/8	1½	F	15	3¾	1/4	4	15	3¾	1/4	4	180	39
Harvey WOA–2	4	1/4	1¼	2	V	11	2	14	1¾	35 5/8	2	F	18	4	1/4	4	18	4	1/4	4	144	39
Harvey WFA–2½	4	1/4	1¼	2	V	11	2	14	1½	35 5/8	2	F	18	4	1/4	4	18	4	1/4	4	144	39
Harvey WHA–3½	4	1/4	2	2	V	12	2	14	1¼	35 5/8	2	F	18	4	1/4	4	18	4	1/4	4	136	32
Hendrickson N–2½	3	1/4	1¼										45	2	1/4	2	45	2	1/4	2	136	32
Hendrickson M–3½	3	1/4	1¼										50	2¼	1/4	2	50	2¼	1/4	2	144	35
Hendrickson K–5	3	1/4	1½										56½	2½	1/4	2	56½	2½	1/4	4	Opt	32½
Higrade A18–1	3	1/8	1	1	V	9	2	7	2	32	½	R	12	3½	1/16	4	12	3½	1/16	4	Opt	38
Higrade B20–1½	3	1/8	1 1/8	1 1/8	V	9	2	7	2	32	½	R	16	3¾	1/16	4	16	3¾	1/16	4	Opt	36
Hurlburt A1½–2	3	1/8	1¼	1									18	4	1/16	4	18	4	1/16	4	Opt	38
Hurlburt B2½	3	1/8	1¼	1									12	1½	1/16	2	12	1½	1/16	2	85	32
Hurlburt C3½–4	3	1/4	1½	1¼									18	2	1/4	2	18	2	1/4	2	100	32
Hurlburt D5–5½	3	1/4	1½	1¼									22	2	1/4	2	22	2	1/4	2	132	35½
Huron–Erie 1½	4	1/4	1	1½									24	2½	1/4	2	23	2½	1/4	2	154	34
Huron-Michigan 2½	4	1/4	1¼	1 1/16									26	3	1/4	2	25	3	1/4	2	144½	34
Indiana 12–1½	3	1/4	1			17	1¼	14	1¼	38½	1		28	3	1/4	2	27	3	1/4	2	144½	34
Indiana 20–2	3	1/4	1¼			6	1¼	13	1¼	26 5/8	1½		15	3	1/4	2	50	2	1/16	2	121	33
Indiana 25–2½	3	1/4	1¼			6	1¼	13	1¼	26 5/8	1½		15	3	1/4	2	50	2½	1/16	2	145	33
Indiana 35–3½	3	1/4	1½			10	1½	17½	1½	26 5/8	1½		17½	2	1/16	4	17½	2	1/16	4	108	32
Indiana 51–5	3	1/4	1½			9¾	2¼	17¾	2¼	30¼	1	F	44	2	1/16	2	44	2	1/4	2	126	33
International S—2000 lbs.–Speed Tr	3	1/4	1¼	1¼	V	6	1½	3½	1 1/8	38 1/8	1 1/8	F	51	2¼	1/4	2	51	2¼	1/4	2	138	33
International 21–2000 lbs.	3	1/4	1¼	1¼	V	6	1½	3½	1 1/8	38 1/8	1 1/8	F	56	2½	1/4	2	56	2½	1/4	2	144	34½
International 31–3000 lbs.	3	1/4	1¼	1¼	V	6	1½	3½	1 1/8	38 1/8	1 1/8	F	68	3	1/4	2	68	3	1/4	2	156	37½
International 41–4000 lbs.	3	1/4	1¼	1¼	V	9	2¼	14½	2				38	2	1/16	2	36	2	1/16	2	90	34
International 52–School Bus	4	1/4	1¼	1¼	V	9	2¼	14½	2				43¾	2¼	1/4	2	43¾	2¼	1/4	2	75 11/16	34
International 61–6000 lbs.	4	1/4	1¼	1¼	V	9	2¼	14½	2				43¾	2¼	1/4	2	43¾	2¼	1/4	2	106½	34
International 101–10,000	4	1/4	1¼	1¼	V	9	2¼	14½	2				50 5/8	2¼	1/16	2	50 5/8	2¼	1/16	2	111 1/16	32¼
Jackson B–3½	3	1/8	1¼	1½		11				32½	1¼		50 5/8	2¼	1/16	2	50 5/8	2¼	1/16	2	118 11/16	34
Kalamazoo G–1	3	1/4	2 1/16	1 1/16		15½	1½	8	1½	40	1½	F	73 1/16	2½	1/16	2	73 1/16	2½	1/16	2	147 1/8	34
Kalamazoo LG	3	1/4	2 1/16	1 1/16		6	1½	16	1¼	39	1½	F	58½	3½	1/4	2					150	36
Kalamazoo NH	3	1/4	2 1/16	1 1/16		20	1¾	19½	1½	42	2	F	50	2½	1/16	1	34	2½	1/16	1	120	32½
Kalamazoo HD	3	1/4	2 1/16	1 1/16		20	1¾	19½	1½	42	2	F	50	2½	1/16	1	34	2½	1/16	1	120	32½
Kalamazoo SK	3	1/4	2 1/16	1 1/16		20	1¾	19½	1½	42	2	F	52	2¼	1/4	1	52	2¼	1/4	1	144	33
Kalamazoo OK	3	1/4	1	1/16	H	16	2	16	2	33	1	F	52	2¼	1/4	1	52	2¼	1/4	1	120	33
Kearns H–1	3	1/8	1	1/16	H	18	2	18	2	33	1	F	57	2½	1/4	1	57	2½	1/4	1	152	36
Kearns N–2	3	1/8	1	1/16	H								68	3	1/4	1	68	3	1/4	2	152	36
Kelly-Springfield K31–1½	4	1/4	1	1/16	V	7	1½	13	1½	54½	1	F	42	2	1/16	1	21	2	1/16	2	90	34
Kelly-Springfield K34–1½	4	1/4	1	1/16	V	7	1½	13	1½	54½	1	F	45	2½	1/16	1	22	2¼	1/16	2	120	34
Kelly-Springfield K35–2½	4	1/4	1	1/16	V	7	1½	13	1½	55½	1	F	16¾	1 7/8	1/16	4	16¾	1 7/8	1/16	4	120	34
Kelly-Springfield K38–2½	4	1/4	1	1/16	V	7	1½	13	1½	55½	1	F	17⅜	1 7/8	1/16	4	17⅜	1 7/8	1/16	4	138	34
Kelly-Springfield K40–3½	4	1/4	1¼	1/16	V	7	1½	13	1½	55½	1	F	16¾	1 7/8	1/16	4	16¾	1 7/8	1/16	4	138	34
Kelly-Springfield K41–3½	4	1/4	1¼	1/16	V	5 3/16	1 5/8	24	1½	63 5/8	1	F	17⅜	1 7/8	1/16	4	17⅜	1 7/8	1/16	4	138	34
Kelly-Springfield K42–3½	4	1/4	1¼	1/16	V	5 3/16	1 5/8	24	1½	60 5/8	1	F	21	2 7/8	1/16	4	21	2 7/8	1/16	4	145	38
Kelly-Springfield K50–5	4	1/4	1¼	1/16	V	5 3/16	1 5/8	24	1½	63 5/8	1	F	27½	2¾	1/4	4	27½	2¾	1/4	4	144	36
Kelly-Springfield K60–6	4	1/4	1¼	1/16	V	5 3/16	1 5/8	24	1½	63 5/8	1	F	21	2 7/8	1/16	4	21	2 7/8	1/16	4	145	38
Kelly-Springfield K61–5 to 7	4	1/4	1¼	1/16	V	5 3/16	1 5/8	24	1½	60 5/8	1	F	21	2 7/8	1/16	4	21	2 7/8	1/16	4	145	38
Keystone 40–2	3	1/4	1	1/16	V	8	2 1/8	8	2 1/8	38	1	F	3 1/16	4½	1/4	4	58	2½	1/16	2	144	36
Kimball AB–2	3	1/4	1¼	1¾	V	6	1½			39	2	F	50½	3	1/16	1	46¾	2	1/16	2	124	33
Kimball AC–2½	3	1/4	1¼	1¾	V	6	1½			39	2	F	45	2	1/4	2	45	2	1/4	2	135	34
Kimball AK3	3	1/4	1¼	1¾	V	6	1½			39	2	F	22½	2¼	1/4	4	22½	2¼	1/4	4	152	34
Kimball AE–4	3	1/4	1½	1¾	V	9	1¾			42	2	F	22½	2¼	1/4	4	22½	2¼	1/4	4	152	34
Kimball AF–5	3	1/4	1½	1¾	V	9	1¾			42	2	F	56	2½	1/4	2	56	2½	1/4	2	171	36
Kissel 1 Ton	3	1/8		1¼		12¼	1¾	10	1½	46¾	2	F	69	3	1/4	2	69	3	1/4	2	171	36
Kissel-Utility 1½	3	1/8		1¼		12¼	1¾	10	1½	46¾	2	F	11	3	1/4	4	11	3	1/4	4	101¼	34
Kissel-Freighter 2	3	1/8		1¼		12¼	1¾	10	1½	49	2	F	19	2	1/16	4	19	2	1/16	4	120	34
Kissel-Heavy-Duty–3½	3	1/8		1¼		13¾	1¾	10	1½	52¼	2	F	14	3½	1/4	4	14	3½	1/4	4	144	34
Kissel-Goliath 5	3	1/8		1¼						55	2	F	56	2½	1/16	2	56	2½	1/16	2	156	36
Kleiber 1	3	1/8	1¼	1¾		13	1½	16	1¼	36	¾		56	2½	1/16	2	56	2½	1/16	2	168	36
Kleiber 1½	3	1/8	1¼	1¾		13	1½	16	1¼	38	1¼		12	3¼	1/4	4	12	3¼	1/4	4	120	34
Kleiber 2	3	1/8	1¼	1¾		13	1½	16	1¼	40	1¼		45	3¼	1/4	4	12	3¼	1/4	4	132	34
Kleiber 2½	3	1/8	1¼	1¾		13	1½	16	1¼	40	1¼		13½	3½	1/4	4	13½	3½	1/4	4	144	34
Kleiber 3½	3	1/8	1¼	1¾		13	1¾	16	1¼	40	1¼		52	3½	1/4	4	13½	3½	1/4	4	150	34
Kleiber 5	4	1/4	1½	1¾		13	1¾	16	1¼	43	1¼		16	3¾	1/4	4	16	3¾	1/4	4	156	38
Koehler D–1½	3	1/8	1	1¼	V	9¼	2	12½	2	37½	1¼		18	4	1/4	4	18	4	1/4	4	168	38
Koehler M–2½	4	1/8	1¼	1¼	V	5¼	1 5/8	5¼	1¼	40¼	1¾		40	1¾	1/4	4	40	1¾	1/4	2	113¼	34
Koehler MCS–2½	4	1/8	1¼	1¼	V	5¼	1 5/8	5¼	1¼	40¼	1¾		13	3½	1/4	4	13	3½	1/4	4	141¾	34
Koehler F–3½	4	1/8	1¼	1¼	V	9	1 5/8	5¼	1¼	40¼	1¾		13	3½	1/4	4	13	3½	1/4	4	129¾	34
Koehler MT–5—Tractor 5	4	1/8	1	1¼	V	5¼	1 5/8	5¼	1¼	40¼	1¾		15½	3¾	1/4	4	15½	3¾	1/4	4	139½	34
Lange B	3	1/8	1	1 5/8	V	3½	2¼	11	2	36½	¾	F	13	3½	1/4	4	13	3½	1/4	4		34
Lange E–2½	3	1/4	1	1 5/8	V	9	1½	15½	1½	42	1½	F	30	2	1/4	2	18	3	1/4	4	114	37
Larrabee U–1½	3	1/8	1		V	9	2	9	2	38	⅝	F	18	3½	1/4	4	18	3½	1/4	4	138	33
Larrabee A.B & L–'20–3½	3	1/8	1¼		V	9	1½	6	1¼	36	1½	F	48	2	1/4	2	48	2	1/4	2	108	34
Larrabee C,D & K–'20–2½	3	1/8	1¼		V	8½	2	17½	2	44	2	F	60	2½	1/4	2	60	2½	1/4	2	168	36
Larrabee W–5	3	1/8	1½		V	6	1¼	6	1¼	36	1¼	F	54	2¼	1/4	2	54	2¼	1/4	2	150	36
Larrabee T	3	1/8	1¼	1 1/16		9	1½	6	1¼	36	1½	F	72	3	1/4	2	72	3	1/4	2	152	36
Luedinghaus K2	3	1/4	1¼	1 1/16		9	1¼	5	1¼		1½	F	72	3	1/4	2	72	3	1/4	2	157	36
Luedinghaus K2–LS	3	1/4	1¼	1 1/16		9	1¼	5	1¼		1½	F	72	3	1/4	2	72	3	1/4	2	120	34
Maccar L	3	1/8	1¼	1⅝	V	3¼	1½	10	1¼	30¾	¾	F	53.4	2½	1/4	2	38½	2½	1/4	2	145½	34
													53.4	2½	1/4	2	38½	2½	1/4	2	145½	34
													11⅝	3¼	¼	4	11⅝	3¼	¼	4	128⅛	34

Replacement Table—Continued

Name, Model and Tonnage	ENGINE												BRAKE LINING								FRAME	
	Piston Rings		Carburetor			Upper Hose		Lower Hose		Fan Belt			Service				Emergency				Length	Width
	No. per Cyl.	Width	Outlet Diameter	Inlet Diameter	Vertical or Horizontal	Length	Width	Length	Width	Length	Width	Type	Length	Width	Thickness	No. of Pieces	Length	Width	Thickness	No. of Pieces	Back of Driver's Seat	Over All
Maccar HA	4	1/4	1 1/4	1 5/8	V	11 1/4	1 1/2	17	1 1/2	41 1/2	1 1/2	F	13 1/2	3 1/2	1/4	4	13 1/2	3 1/2	1/4	4	143 5/8	34
Maccar H 2	4	1/4	1 1/4	1 5/8	V	9 1/2	1 1/2	15 1/2	1 1/2	41 1/2	1 1/2	F	13 1/2	3 1/2	1/4	4	13 1/2	3 1/2	1/4	4	141 1/2	34
Maccar M–3	4	1/4	1 1/4	1 5/8	V	11 1/4	1 1/2	15 1/2	1 1/2	41 1/2	1 1/2	F	14 3/4	3 3/4	1/4	4	14 3/4	3 3/4	1/4	4	155 1/2	34
Maccar G	4	1/4	1 1/2	1 7/8	V	10 1/2	2	20 1/2	2	40 3/4	2	F	18	4	1/4	4	18	4	1/4	4	166 5/8	37 1/2
MacDonald A–7 1/2	4	1/4	1 1/4		V	12	2	21	1 1/4	35	2	F	70	3	1/4	1	34	3	1/4	1		
Mack AB–1 1/2, 2, 2 1/2–Ton–Chain	3	1/4	1 1/4	1 1/2	V	12 1/4	2	4 3/4	1 1/2	33	1 1/2	F	18 1/4	4	1/4	2	16 1/2	4	1/4	2	Opt	33 1/4
Mack Dual Reduction–1 1/2–2,2 1/2	3	1/4	1 1/4	1 1/2	V	18 1/4	3 1/2	4 3/4	1 1/2	33	1 1/2	F	12 1/4	4	1/4	2	12	6	1/4	2	Opt	33 1/4
Mack AB–Tractor 5 Ton	3	1/4	1 1/4	1 1/2	V	16 1/8	3	4 3/4	1 1/2	33	1 1/2	F	16 1/8	4	1/4	4	16 1/2	2 1/4	1/4	4	77	33 1/2
Mack AC–3 1/2 to 7 1/2 Ton	3	1/4	1 1/2	1 1/2	V	9 1/2	1 1/2	4 3/4	1 1/2	96	1	F	16 1/8	3	1/4	4	20 1/2	3 1/2	1/4	4	Opt	37 1/2
Mack AC–Tractor 7 to 15 Ton	3	1/4	1 1/2	1 1/2	V	9 1/2	1 1/2	4 3/4	1 1/2	96	1	F	16 1/8	3	1/4	4	20 1/2	3 1/2	1/4	4	87	37 1/2
Master JI–1 1/2	4	1/4	1 1/4		V	5 3/4	2 1/4	4 3/4	1 1/2	96	1	F	16 1/8	2 1/2	1/4	4	20 1/2	3 1/2	1/4	4	117 3/4	34 1/2
Master JW–1 1/2	4	1/4	1 1/4		H	13 1/2	2	12 1/2	1 1/4	30 1/2	1	F	74 1/2	2 1/2	1/8	1	74 1/2	2 1/2	1/8	1	117 3/4	34 1/2
Master M–2 1/2	4	1/4	1 1/4		V	13 1/2	12	12 1/2	1 1/4	30 1/2	1	F	12	3 1/4	1/4	2	12	3 1/4	1/4	2	117 3/8	34
Master O 2 1/2	4	1/4	1 1/4		V	13 1/2	2	12 1/2	1 1/4	33	1 1/4	F	74	2 1/2	1/8	1	74 1/2	2 1/4	1/4	1	156 3/8	34
Master W–2 1/2	4	1/4	1 1/4		V	13 1/2	2	11 1/2	1 1/4	33	1 1/4	F	75 1/2	2 1/2	1/8	1	74 1/2	2 1/4	1/4	1	117 3/8	34
Master WL–2 1/2	4	1/4	1 1/4		V	13 1/2	2	12 1/2	1 1/4	31	1 1/4	F	13 1/4	3 1/2	1/4	2	13 1/4	3 1/2	1/4	2	156 3/8	34
Master D–2 1/2	4	1/4	1 1/4		V	13 1/2	2	12 1/2	1 1/4	31	1 1/4	F	13 1/4	3 1/2	1/4	2	13 1/4	3 1/2	1/4	2	117 3/8	34
Master DL–2 1/2	4	1/4	1 1/4		V	13 1/2	2	12 1/2	1 1/4	35	1 1/4	F	8 5/8	4 1/2	1/8	2	54 1/16	3	1/4	2	156 3/8	34
Master T–6 Tractor	4	1/4	1 1/2		V	13 1/2	2	15	1 1/4	35	2	F	8 5/8	4 1/2	1/8	2	54 1/16	3	1/4	2	117 3/8	34
Master A–3 1/2	4	1/4	1 1/2		V	13 1/2	2	15	1 1/4	35	2	F	74 1/2	2 1/2	1/8	1	74 1/2	2 1/4	1/4	1	156 3/8	34
Master AL–3 1/2	4	1/4	1 1/2		V	13 1/2	2	15	1 1/4	35	2	F	16	3 3/4	1/4	2	16	3 3/4	1/4	2	72 1/2	34
Master E–3 1/2	4	1/4	1 1/2		V	13 1/2	2	15	1 1/4	35	2	F	16	3 3/4	1/4	2	16	3 3/4	1/4	2	147 3/4	36 1/4
Master EL–3 1/2	4	1/4	1 1/2		V	13 1/2	2	15	1 1/4	35	2	F	11	6	1/4	2	25	4	1/4	2	183 3/4	36 1/4
Master B–5	4	1/4	1 1/2		V	13 1/2	2	15	1 1/2	37	2	F	11	6	1/4	2	25	4	1/4	2	147 3/4	36 1/4
Master BL–5	4	1/4	1 1/2		V	13 1/2	2	15	1 1/2	37	2	F	11	6	1/4	2	25	4	1/4	2	183 3/4	36 1/4
Master F–5	4	1/4	1 1/2		V	13 1/2	2	15	1 1/2	37	2	F	11	6	1/4	2	25	4	1/4	2	162 1/8	39
Master FL–5	4	1/4	1 1/2		V	13 1/2	2	15	1 1/2	37	2	F	18	4	1/4	2	18	4	1/4	2	186 1/8	39
Master DT–6 Tractor	4	1/4	1 1/4	2	H	13 1/2	2	12 1/2	1 1/4	35	1 1/4	F	18	4	1/4	2	18	4	1/4	2	162 1/8	39
Maxwell 1 1/2	3	1/4	1	1	V	6 1/4	2 1/8	7 3/4	2 1/8	44 1/2	1 1/2		11	6	1/4	2	25	4	1/4	2	186 1/8	39
Menominee HT–1	3	1/4	1	1 1/2									11	6	1/4	2	25	4	1/4	2	162 1/8	39
Menominee H–1 1/2	3	1/4	1 1/4	1 3/4									11	6	1/4	2	25	4	1/4	2	186 1/8	39
Menominee D–2	3	1/4	1 1/4	1 3/4									16	3 1/2	1/4	2	54 3/16	3	1/4	2	72 1/8	43
Menominee G–3 1/2	3	1/4	1 1/2	2									8 5/8	4 1/2	1/8	2	54 1/16	3	1/4	2	102	36
Menominee J–5	3	1/4	1 1/2	2									16	1 3/4	1/4	8	16	1 1/4	1/8	4	104	32
Menominee G–3 1/2	3	1/4	1	1 1/2		9 1/4	1 3/4	10 1/2	1 1/4	33 3/4	1 1/4	F	12	3 1/4	1/4	8					122	32
Menominee HT–1	3	1/4	1	1 3/4		9 1/4	1 3/4	10 1/2	1 1/4	33 3/4	1 1/4	F	13 1/2	3 1/2	1/4	8					146	32
Menominee H–1	3	1/4	1 1/4	1 3/4		3	1 3/4	3	1 1/2	37 3/4	2	F	13 1/2	3 1/2	1/4	8					149	36
Menominee D–2	3	1/4	1 1/4	1 3/4		3	1 3/4	3	1 1/2	37 3/4	2	F	16	3 1/2	1/4	8					149	38
Menominee G–3 1/2	3	1/4	1 1/2	2		3	1 3/4	3	1 3/4	40 3/4	2	F	18 1/2	4	1/4	8					102 3/4	32
Menominee J–5	3	1/4	1 1/4	1 3/4		3	1 3/4	3	1 3/4	37 3/4	2	F	47 1/16	2 1/2	1/8	2	33 1/4	2 1/2	1/8	2	124	32
Menominee G–3 1/2	3	1/4	1 1/2	2		3	1 3/4	3	1 3/4	40 3/4	2	F	47 1/16	2 1/2	1/8	2	33 1/4	2 1/2	1/8	2	131 1/2	32
Menominee J–3–5	3	1/4	1 1/2	2		3	1 3/4	3	1 3/4	40 3/4	2	F	57 1/2	2 1/2	1/8	2	42 1/2	2 1/2	1/8	2	149	36
Moline 10	3	1/4			H	10 1/2	2 1/4	4 1/2	2 1/4			F	57 1/2	2 1/2	1/8	2	42 1/2	2 1/2	1/8	2	149	38
Moreland 21B–1 1/2	3	1/4	1 1/4	1 1/2	H	9	1 1/2	13	1 1/2	42	1 1/2	F	69 1/16	3 1/2	1/4	2	52	2 1/2	1/8	2	149	36
Moreland 21C–2 1/2	3	1/4	1 1/2	1 1/2	H	9	1 1/2	13	1 1/2	42	1 1/2	F	15 5/8	3 3/4	1/4	4	15 5/8	3 3/4	1/4	4	149	38
Moreland 21H–4	3	1/4	1	1 1/2	H	9	1 1/2	13	1 1/2	42	1 1/2	F	18	4	1/4	4	18	4	1/4	4	108	32
Napoleon 9–1	3	1/4	1	1 1/2	H	6 1/2	2 1/4	14	2 1/4	39	1	F	21	2 1/2	1/4	2	20	2	1/4	4	132	34
Napoleon 11–1 1/2	3	1/4	1	1 1/2	H	6 1/2	2 1/4	14	2 1/4	39	1	F	21	3 1/4	1/4	4	12	3 1/4	1/4	4	132	34
Nash 2018–1–1 1/2	4	1/4	1 1/4	1 1/4		3	1 1/2			36	1	F	21	3 1/2	1/4	4	13 1/2	3 1/2	1/4	4	156	38
Nash 3018–2–2 1/2	4	1/4	1 1/4	1 1/4		7	1 1/2			44	2	F	21	4	1/4	1	30	2 1/2	1/8	1	100 3/4	35 3/4
Nash 4017–2–2 1/2	4	1/4	1 1/4	1 1/4						44	2	F	49 1/8	2	1/8	2	20 7/16	2 1/2	1/8	1	100 3/4	35 3/4
Nelson & LeMoon G–2	4	1/4	1 1/4	1 1/16									50 5/8	3	1/8	2	20 7/16	2 1/2	1/8	1	104 1/2	30 1/2
Nelson & LeMoon G–3	4	1/4	1 1/4	1 1/16									49 1/4	2 1/2	1/4	2	25 11/16	2 1/2	1/4	2	118 1/4	31 3/4
Nelson & LeMoon G–4	4	1/4	1 1/4	1 1/16									12	3 1/4	1/4	2	12	3 1/4	1/4	2	117 1/8	38 1/4
Nelson & LeMoon G–5	4	1/4	1 1/4	1 1/16									12	3 1/4	1/4	2	12	3 1/4	1/4	2	Opt	
Netco DK–2	3	1/4	1 1/4	1 1/2	V	12	1 1/2	16	1 1/4	40 1/16	1 1/2	F	16 1/2	3 3/4	1/4	2	16 1/2	3 3/4	1/4	2	Opt	
Netco HL–2 1/2–3	3	1/4	1 1/4	1 1/2	V	13	1 1/2	16	1 1/4	41 1/4	1 1/2	F	18	4	1/4	2	18	4	1/4	2	Opt	
Niles E–2	3	1/4	1 1/2	1 3/4	V	8	1 1/4	11	1 1/4	30	3/4	F	13 1/16	3 1/2	1/4	4	13 3/16	3 1/2	1/4	4	Opt	34 1/2
Noble A21–1 1/4	4	1/4	1	1 1/16		10	1 3/4	12	1 1/4	33 1/2	1 1/2	F	13 1/16	3 1/2	1/4	4	13 1/16	3 1/2	1/4	4	139	34 1/4
Noble B31–1 1/2	4	1/4	1	1 1/16		7	1 7/8	16 1/2	1 1/4	34 1/4	1 7/8	F	12	3	1/4	2	12	3 1/4	1/4	2	147	56
Noble D51–2 1/2	4	1/4	1 1/4	1 1/16		9	2	12	1 1/4	34 1/4	1 7/8	F	19	2	1/4	2	19	2	1/4	2	102	34
Noble E71—3 1/2	4	1/4	1 1/4	1 1/16		14 1/2	2	16	1 1/4	34 1/4	1 7/8	F	43	2	1/4	2	43	2	1/4	2	126	34
Northway B–2	3	1/4	1 1/4	1 3/4	V	5 1/4	2 1/4	13 7/8	1 1/4	46 21/32	5/8	F	21	2 1/4	1/4	4	21	2 1/4	1/4	4		
Northway B–3	3	1/4	1 1/16	1 3/4	V	5 1/4	2 1/4	13 7/8	1 1/4	46 21/32	5/8	F	57	2 1/2	1/4	2	57	2 1/2	1/4	2	133	33
Norwalk 25E–1	3	1/4	1	1 1/16	V	9	2 1/4	19	2 1/4	29	3/4	F	50 1/2	2 1/4	1/4	2	50 1/2	2 1/4	1/4	2	173	34 1/4
Norwalk 35E–1 1/2	3	1/4	1	1 1/16	V	9	2 1/4	19	2 1/4	29	3/4	F	54	2 1/2	1/4	2	54	2 1/2	1/4	2	100	36
Norwalk 35E Spec.–1 1/2	3	1/4	1	1 1/16	V	11	2 1/4	18	1 1/2	36	2	F	16 1/2	2 1/4	1/4	2	16 1/2	2 1/4	1/4	2	124	34
Ogden A–1	3	1/4	1	1	V	12	2	6	2	44	3/4	F	19	2	1/4	2	19	2	1/4	2	124	34
Ogden D–1 1/2	3	1/4	1	1	V	12	2	6	2	44	3/4	F	18	4	1/4	4	18	4	1/4	4	108	33 1/4
Ogden E–2 1/2	3	1/4	1	1	V	13	2	12	2	44	3/4	F	13 1/16	3 1/2	1/4	4	13 3/16	3 1/2	1/4	4	120	33 1/4
Ogden F–3 1/2	3	1/4	1 1/4	2	H	10	1 1/8	14	1 1/4	30	1 1/4	F	13 1/16	3 1/2	1/4	4	13 3/16	3 1/2	1/4	4	144	33 1/4
Ogden G–5	3	1/4	1 1/4	2	H	11	1 1/2	16	1 1/2	36	1 1/2	F	12	3 1/4	1/4	2	12	3 1/4	1/4	2	168	33 1/4
O. K.–1 1/2	4	1/4	1 1/2	2		9	2	18	2	40	2	F	52	2 1/4	1/4	2	52	2 1/4	1/4	2	168	33 1/4
O. K.–2 1/2	4	1/4	1 1/4	2		12	2	13 1/2	1 1/4	36	2	F	15 5/16	3 3/4	1/4	2	15 5/16	3 3/4	1/4	2	117	34
O. K.–3 1/2	4	1/4	1 1/4	2		12	2	13 1/2	1 1/4	36	2	F	11	2 1/2	1/4	2	11	2 1/2	1/4	2	121	35
Old Reliable A–1 1/2	3	1/4	1 1/4	1 1/4		12	2	13 1/2	1 1/4	38	2	F	62	2 1/2	1/4	2	48	2 1/2	1/4	2	133	34
Old Reliable B–2 1/2	3	1/4	1 1/4	1 1/4		12	2	13 1/2	1 1/4	38	2	F	62	2 1/2	1/4	2	48	2 1/2	1/4	2	105	32
Old Reliable C–3 1/2	3	1/4	1 1/4	1 1/4									48	2 1/2	1/4	2	48	2 1/2	1/4	2	144	32
Old Reliable D–5	3	1/4	1 1/2	1 1/2									54	2	1/4	1	54	2	1/4	1	150	32
Old Reliable K. L. M.–7	3	1/4	1 1/2	1 1/2									60	2 1/2	1/4	1	60	2 1/2	1/4	1	156	34
Oldsmobile T–1	3	1/4	1 1/16	1 3/8	V	5	1 1/4	11	1 1/4	37 41/64	3/4	V	72	3	1/4	1	72	3	1/4	1	158	36
Olympic 2 1/2	4	1/4	1 1/4	1 1/2	V	13	2	12	1 1/4	34	2	F	54	3 1/2	1/4	1	60	4	1/4	1	92 5/8	34
Oneida B9–1 1/2	3	1/16	1 1/4	1 1/2	V	9 1/2	1 1/4	9 1/2	1 1/4	38 1/2	2	F	42 1/4	2	1/4	1	41 1/16	2	1/4	1	Opt	32 1/2
Oneida C9–2 1/2	3	1/16	1 1/4	1 1/2	V	9 1/4	1 1/4	9 1/2	1 1/4	38 1/2	2	F	13 1/2	3 1/2	1/4	2	13 1/2	3 1/2	1/4	2	114	34
Oneida D9–3 1/2	3	1/16	1 1/4	1 1/2	V	7	1 1/2	9 1/2	1 1/2	40	2	F	48	2 1/2	1/4	2	48	2 1/2	1/4	2	138	34
Oneida E9–5	3	1/16	1 1/4	1 1/2	V	7 1/2	1 3/4	9 1/2	1 1/2	40	2	F	58	2 1/2	1/4	2	58	2 1/2	1/4	2	157	36
Packard EC	3	1/4	1 1/4	1 3/4	V	6 1/4	1 1/2	10 3/8	1 1/2	41 1/16	1 1/2	F	16	3 3/4	1/4	2	16	3 3/4	1/4	2	177	38
Packard ED	3	1/4	1 1/4	1 3/4	V	6 1/4	1 1/2	10 3/8	1 1/2	43 1/16	1 1/2	F	18	4 3/4	1/4	2	18	4 3/4	1/4	2	132	31 3/4
Packard EF	3	1/4	1 1/4	1 3/4	V	6 1/4	1 1/2	10 3/8	1 1/2	43 1/16	1 1/2	F	7 11/16	4 3/4	1/4	2	7 11/16	4 3/4	1/4	2	144	39
Packard EX	3	1/4	1 1/4	1 3/4	V	6 1/4	1 1/2	10 3/8	1 1/2	41 1/16	1 1/2	F	9 1/16	4 3/4	1/4	2	9 1/16	4 3/4	1/4	2	144	39
Paige 54–20–2 1/2	3	1/4	1 1/4	1 5/8	V	10 1/2	1 1/2	10 3/8	1 1/2	43 1/16	1 1/2	F	9 1/16	6 1/2	1/4	2	9 1/16	6 1/2	1/4	2	132	31 3/4
Paige 51–18–3 1/2	3	1/4	1 1/4	1 5/8	V	6 1/4	1 1/2	10 3/8	1 1/2	41 1/16	1 1/2	F	7 1/16	4 3/4	1/4	2	7 1/16	4 3/4	1/4	2	126	33
Paige 52–19–1 1/2	3	1/4	1 1/4	1 5/8	V	6 1/4	1 1/2	10 3/8	1 1/2	41 1/16	1 1/2	F	49 5/8	2 1/4	1/4	2	49 5/8	2 1/4	1/4	2	144	35
Parker C22–1	3	1/4	1 1/4	1 3/4	V	10 1/2	1 1/2	10 3/8	1 1/2	37 5/8	1 1/4	F	15 5/8	3 3/4	1/4	4	15 5/8	3 3/4	1/4	4	144	33
Parker G1–2 1/2	3	1/4	1 1/4	1 3/4	V	13	1 1/2	13	1 1/2	37 5/8	2	F	11 1/2	3 1/4	1/4	4	11 1/2	3 1/4	1/4	4	126	33
Parker J20–3 1/2	3	1/4	1 1/4	1 3/4	V	8	1 1/4	12	1 1/4	39	1 1/2	F	10 1/2	3	1/4	2	10 1/2	3	1/4	2	95	33
Parker M20–5	3	1/4	1 1/4	1 3/4	V	16	1 3/4	12 1/2	1 1/4	38	1 1/2	F	10 3/4	5	1/4	2	19	2 1/2	1/4	4	127	33
Patriot Revere–1	3	1/4	1 1/4	1 1/2	V	19	1 3/4	16	1 1/2	38	1 1/2	F	10 3/4	5	1/4	2	19	3 1/2	1/4	4	139 1/2	33
Patriot Lincoln Special–2	3	1/4	1 1/4	1 1/2	V	19	1 3/4	16 1/2	1 1/2	38	1 1/2	F	10 3/4	5	1/4	2	24 1/2	4	1/4	4	145	37
Patriot Washington Special–3	3	1/4	1 1/4	1 1/2	V	14	1 3/4	18	1 3/4	40 1/2	1 1/2	F	10 3/4	1 3/4	1/4	2	40 1/2	1 3/4	1/4	2	93	66
	3	1/4	1 1/2	1 3/4	V	8	2	9	2	39	1 1/4	F	40 1/2	1 3/4	1/4	2	40 1/2	1 3/4	1/4	2	113	67 1/2
	3	1/4	1 1/4	1 1/2	V	6	1 1/4	8	1 1/2	37	1 3/4	F	58	2 1/2	1/4	1	43	2 1/2	1/4	1	150	67 1/2
	3	1/4	1 1/4	1 1/2	V	11	1 1/2	10	2	39	2	F										

Replacement Table—Continued

Name, Model and Tonnage	ENGINE											BRAKE LINING								FRAME	
	Piston Rings		Carburetor			Upper Hose		Lower Hose		Fan Belt			Service				Emergency				Length	Width
	No. per Cyl.	Width	Outlet Diameter	Inlet Diameter	Vertical or Horizontal	Length	Width	Length	Width	Length	Width	Type	Length	Width	Thickness	No. of Pieces	Length	Width	Thickness	No. of Pieces	Back of Driver's Seat	Over All
Pierce Arrow–2–X–5	3	1/4	1 1/16	1 5/8	V	16 3/8	2 3/8	14 1/4	2 1/8	43 1/2	1 1/2	F	22 1/4	2 1/4	1/4	4	22 1/4	2 1/4	1/4	4	125 7/16	34 1/8
Pierce Arrow–3½–W–2	3	1/4	1 1/16	1 7/8	V	11	2 3/8	15 1/2	2 1/8	43 1/2	1 1/2	F	9 11/16	6	1/4	2	18	4 3/4	1/4	4	133 1/4	38 1/8
Pierce Arrow–5–R–10	3	1/4	1 1/16	1 7/8	V	11	2 3/8	15 1/2	2 1/8	43 1/2	1 1/2	F	9 11/16	6	1/4	2	20 7/8	4 3/4	1/4	4	139 1/4	38 1/8
Pioneer 59AA–1	3	1/4	1 1/4	1 1/2	V	13	2	12	2	35	1	F	14	1 3/4	1/4	4	14	1 3/4	1/4	4	102	30
Pittsburgher 2½	3	1/4	1 1/4	1 1/4	V	6	1 1/2	12	1 1/4	37	1	F	52	2 1/4	1/4	2	52	2 1/4	1/4	2	136	33
Rainier R–8–2	3	1/4	1 1/16	1/2	V	5	1 1/2	13	1 1/2	31 1/2	1 1/4	F	44 1/2	2	1/4	1	44 1/2	2	1/4	1	.....	34
Rainier R6–1½	3	1/4	1 1/16	1/2	V	9 3/4	1 1/2	14 3/4	1 1/2	41	1 1/2	F	19	2	1/4	2	19	2	1/4	2	113	34
Rainier R–19–1	3	1/4	1 1/16	1/2	V	8 1/2	1 1/2	14	1 1/2	41	1 1/2	F	19	2	1/4	2	19	2	1/4	2	100	34
Rainier R–11–3/4	3	1/4	1 1/16	1/2	V	9	1 1/2	14 1/2	1 1/2	42	1 1/2	F	11 1/4	3	1/4	2	11 1/4	3	1/4	2	90	34
Ranger TK–20–2	3	1/4	1 1/16	1 1/2	H	11 3/4	1 1/16	10	1 1/4	33 3/4	1	F	11 1/2	3 1/4	M	2	11 1/2	3 1/4	1/4	2	106 1/2	33
Reliance 10A–1½	4	1/4	1 1/4	3/8	V	10 1/2	2	13 1/2	1 3/8	35	2	F	17	2	1/4	4	17	2	1/4	4	122	32
Reliance 20B–2½	4	1/4	1 1/4	3/8	V	10 1/2	2	13 1/2	1 3/8	35	2	F	17	2	1/4	4	17	2	1/4	4	127	32
Reo F—1500–2500 lbs	3	1/4	1	1	V	5 1/2	1	5 1/2	1	39 1/4	7/8	F	43	2 1/4	1/4	1	39 5/8	2	1/4	1	82	30
Republic 10-1-10E-1	3	1/4	1	....	V	12 1/4	2	6	2	40 1/4	1 1/4	F	21 1/4	2 1/2	1/4	4	19 3/4	2 1/4	1/4	4	.....	34
Republic 11X–1½	3	1/4	1	....	V	12 1/4	2	6	2	40 1/4	1 1/4	F	25 1/4	2 1/2	1/4	4	24 1/4	2 1/4	1/4	2	118	34
Republic 19–2½	3	1/4	1 1/4	....	V	8	1 1/2	11 3/4	1 1/4	32 1/8	1 1/4	F	25 1/4	2 1/2	1/4	4	24 1/4	2 1/4	1/4	2	121	34
Republic 20–3½	3	1/4	1 1/4	....	V	7 1/4	1 3/4	5 1/2	1 1/4	36 1/4	1 1/2	F	55 3/4	3 1/2	1/4	2	30 11/16	4 1/2	1/4	1	146	37
Republic Rapid Transit–¾	3	1/4	1	....	V	12	2 1/4	18 1/2	2 1/4	31 11/16	1	F	19	2	1/4	4	18	2	1/4	4	95	31
Rowe CW–1½	3	1/4	1 1/4	1/4	....	10 1/2	1 3/4	10 1/2	1 1/2	32 1/2	1 1/8	F	19	2	1/4	8	19	2	1/4	8	113	33
Rowe CDW–2	3	1/4	1 1/4	1/4	....	10 1/2	1 3/4	10 1/2	1 1/2	32 1/2	1 1/8	F	45	2	1/4	4	45	2	1/4	4	123	33
Rowe CDW–2½	3	1/4	1 1/4	1/4	V	20	1 3/4	15 1/2	1 1/2	32 1/2	1 1/8	F	51 1/2	2 1/2	1/4	4	51 1/2	2 1/2	1/4	4	123	33
Rowe GSW–3	3	1/4	1 1/4	1/4	....	20	1 3/4	15 1/2	1 1/2	36 1/4	2	F	51 1/2	2 1/2	1/4	4	51 1/2	2 1/2	1/4	4	140	33
Rowe HW–4	3	1/4	1 1/4	1/4	....	20	1 3/4	15 1/2	1 1/2	36 1/2	2	F	56 1/2	2 1/2	1/4	4	56 1/2	2 1/2	1/4	4	146	36
Rowe FW–5	3	1/4	1 1/4	1/4	....	20	1 3/4	15 1/2	1 1/2	36 1/4	2	F	68	3	1/4	4	68	3	1/4	4	153	38 1/2
Rowe GPW–3	3	1/4	1 1/4	1/4	....	10	1 1/4	6	1 3/4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	152	33
Rumely A–1½	4	1/4	1 1/16	1 1/16	V	10 1/2	1 3/4	10 1/4	1 1/4	37	2	F	18	2	1/4	4	18	2	1/4	4	122	34
Samson 15–¾	3	1/4	1 1/16	1 1/8	V	6 1/2	1 1/4	7 3/4	1 1/4	35 11/16	11/16	V	37	2	1/4	1	35 3/4	1 3/4	1/4	1	108 1/4	39 1/2
Samson 25–1¼	3	1/4	1 1/16	1 1/8	V	6 1/2	1 1/4	7 3/4	1 1/4	37 11/16	11/16	V	43 3/8	2	1/4	1	37 1/16	1 3/4	1/4	1	108 1/4	39 1/2
Sanford W15–1	3	1/4	1	1	H	.....	.....	.....	.....	.....	.....	.....	22 1/4	2 1/4	1/4	4	22 1/4	2 1/4	1/4	4	.....	.....
Sanford 25–2½	3	1/4	1 1/4	1 1/4	V	.....	.....	.....	.....	.....	.....	.....	22 1/4	2 1/4	1/4	4	22 1/4	2 1/4	1/4	4	.....	.....
Sanford 35–3½	3	1/4	1 1/4	1 1/4	V	.....	.....	.....	.....	.....	.....	.....	55 3/4	2 1/2	1/4	2	55 3/4	2 1/2	1/4	2	.....	.....
Sanford 50–5	3	1/4	1 1/4	1 1/4	V	.....	.....	.....	.....	.....	.....	.....	65	2	1/4	2	65	2	1/4	2	.....	.....
Schacht F–2	4	1/4	1 1/4	2	H	11	2	14	1 1/4	37 1/2	2	F	8 1/4	3	1/4	4	13 1/2	3	1/4	4	140	35 3/4
Schacht F–3	4	1/4	1 1/4	2	H	11	2	14	1 1/4	37 1/2	2	F	8 1/4	3	1/4	4	13 1/2	3	1/4	4	140	35 3/4
Schacht E–4	4	1/4	1 1/4	2	H	10 1/2	2	13 1/2	1 1/4	39 1/4	7/8	V	8 1/4	3	1/4	4	15	4	3/8	4	152	35 3/4
Schacht E–5	4	1/4	1 1/4	2	H	10 1/2	2	13 1/2	1 1/4	39 1/4	7/8	V	8 1/4	3	1/4	4	15	4	3/8	4	152	35 3/4
Schacht E–7	4	1/4	1 1/4	2	H	10 1/2	2	13 1/2	1 1/4	39 1/4	7/8	V	8 1/4	3 1/4	1/4	4	15	4	3/8	4	152	35 3/4
Schwartz A–1	3	1/4	1	1/4	V	9 1/2	2 1/4	13	2 1/4	29 1/2	7/8	F	15 5/8	1 3/4	1/4	4	15 5/8	1 3/4	1/4	4	.....	.....
Schwartz K–2	4	1/4	1	1/4	H	10	1 3/4	18	1 1/4	33 1/8	2	F	20 1/4	2 1/4	1/4	4	20 1/4	2 1/4	1/4	4	120	34
Schwartz LS–L–LL–3	4	1/4	1 1/4	1/4	H	10 1/2	2	15	1 1/4	33 1/8	2	F	51 1/2	2 1/4	1/4	2	51 1/2	2 1/4	1/4	2	.....	34
Schwartz MS–M–ML–5	4	1/4	1 1/4	1/4	H	12 1/2	2	17	1 1/4	38 3/8	2	F	69 1/2	3	1/4	2	69 1/2	3	1/4	2	.....	36
Selden Unit 30	3	1/4	1	1 1/16	V	12	2	.....	.....	41	1 1/4	F	11 1/16	3 1/4	1/4	4	11 1/16	3 1/4	1/4	4	114	34
Selden Unit 50	3	1/4	1	1 1/16	V	3 3/4	1 1/4	12	1 1/4	31	1 1/2	F	13	3 1/2	1/4	4	13	3 1/2	1/4	4	134	34
Selden Unit 31	3	1/4	1	1 1/16	V	3 3/4	1 1/4	12	1 1/4	31	1 1/2	F	13	3 1/2	1/4	4	13	3 1/2	1/4	4	176	34
Selden Unit 70	3	1/4	1 1/4	1 1/16	V	9	1 3/4	5 1/2	1 3/4	34 1/4	2	F	15 5/8	3 3/4	1/4	4	15 5/8	3 3/4	1/4	4	153	37 1/2
Selden Unit 51	3	1/4	1 1/4	1 1/16	V	7 1/2	1 1/2	15 1/2	1 1/4	31 1/2	2	F	13	3 1/2	1/4	4	13	3 1/2	1/4	4	134	34
Selden Unit 90	3	1/4	1 1/2	1 1/16	V	7	2	20 1/2	2	40 3/8	2	F	17 11/16	4	1/4	4	17 11/16	4	1/4	4	153	37 1/2
Service 12–¾	3	1/4	1 1/4	1 1/16	V	13 1/2	2 1/2	14 1/2	2 1/2	35 1/2	1 1/4	F	10 1/16	2 1/2	1/4	4	10 1/16	2 1/2	1/4	4	101 1/2	37 1/16
Service 15—1¼	3	1/4	1 1/4	1 1/16	V	10	1 3/4	2	1 1/4	35	2	F	19 3/8	1 3/4	1/4	4	19 3/8	1 3/4	1/4	4	101 1/2	37 1/16
Service 220–1½	3	1/4	1 1/4	1 1/16	H	10	2	6	1 3/4	37 3/4	1	F	12	3 1/4	1/4	2	12	3 1/4	1/4	2	109 1/2	34
Service 31–2	4	1/4	1 1/4	1 1/16	V	10	2	8	1 1/4	33	1 1/4	F	12	3 1/4	1/4	2	12	3 1/4	1/4	2	121 1/16	34
Service 36–2	4	1/4	1 1/4	1 1/16	V	10	2	8	1 1/4	33	1 1/4	F	12	3 1/4	1/4	2	12	3 1/4	1/4	2	121 1/16	34
Service 51–3	4	1/4	1 1/4	1 1/16	V	10	2	8	1 1/4	33	1 1/4	F	13 1/2	3 1/2	1/4	2	13 1/2	3 1/2	1/4	2	131 1/8	34
Service 71–3½	4	1/4	1 1/4	1 1/16	V	10	2	8	1 1/4	33	1 1/4	F	16	3 3/4	1/4	2	16	3 3/4	1/4	2	150 1/4	38
Service 76–4	4	1/4	1 1/4	1 1/16	V	10	2	10	1 1/4	38 1/4	1 1/2	F	16	3 3/4	1/4	2	16	3 3/4	1/4	2	145 3/4	38
Service 101–6	4	1/4	1 1/4	1 1/16	V	10	2	10	1 1/4	38 1/4	1 1/2	F	18 1/2	4	1/4	2	18 1/2	4	1/4	2	145 3/4	38
Signal NF–1	4	1/4	1 1/4	1 1/16	V	7 1/4	1 1/2	12	1 1/2	39 3/4	1 1/4	....	11	3	1/4	4	11	3	1/4	4	120	.....
Signal H 1½	3	1/4	1 1/4	1 1/16	V	8	1 1/2	9	1 1/4	30 1/2	1 1/4	....	12	3 1/4	1/4	4	12	3 1/4	1/4	4	120	34
Signal J–2½	3	1/4	1 1/4	1 1/16	V	10	1 1/2	12	1 1/4	30 1/2	1 1/4	....	13 1/2	3 1/2	1/4	4	13 1/2	3 1/2	1/4	4	126	34
Signal M 3½	3	1/4	1 1/4	1 1/16	V	5 1/2	1 1/2	12	1 1/4	34 1/4	1 1/4	....	16	3 3/4	1/4	4	16	3 3/4	1/4	4	168	38
Signal R–5	3	1/4	1 1/4	1 1/8	V	8	2	16	2	41	2	....	18	4	1/4	4	18	4	1/4	4	172	38
Standard I-K-1–1½	3	1/4	1	1 1/16	V	10 1/2	2 1/16	14 3/4	1 1/16	39 1/4	1 1/4	F	10 7/8	3	1/4	4	10 7/8	3	1/4	4	120	32
Standard 76–2½–3	3	1/16	1 1/4	1 1/16	V	.....	1 1/8	12	1 1/8	31 1/4	1 1/4	F	13 1/16	3 1/2	1/4	4	13 1/16	3 1/2	1/4	4	122	32
Standard 66–3½–4	3	1/4	1 1/4	1 1/16	V	12	2 1/8	18	1 1/8	36 1/2	1 1/2	F	15 5/8	3 3/4	1/4	4	15 5/8	3 3/4	1/4	4	144	38
Standard 5K–5–7	3	1/4	1 1/2	1 1/4	V	8	2 1/16	3 1/2	2 5/8	42 1/4	2	F	17 11/16	4	1/4	4	17	4	1/4	4	144	38
Sterling 1½	3	1/4	1 1/4	1/4	V	11	1 1/2	19	1 1/2	38	1 1/2	F	11 3/4	3 1/4	1/4	8	11 3/4	3 1/4	1/4	8	120	33 1/2
Sterling 2	3	1/4	1 1/4	1/4	V	11	1 1/2	19	1 1/2	38	1 1/2	F	13 3/8	3 1/2	1/4	8	13 3/8	3 1/2	1/4	8	120	33 1/2
Sterling 2½	3	1/4	1 1/4	1/4	V	11	1 1/2	19	1 1/2	38	1 1/2	F	13 3/8	3 1/2	1/4	8	13 3/8	3 1/2	1/4	8	138	34
Sterling 3½	3	1/4	1 1/2	1/4	V	14 5/8	1 1/2	22	1 1/2	40 1/2	1 1/2	F	15 3/4	3 3/4	1/4	8	15 3/4	3 3/4	1/4	8	144	38
Sterling 5-Worm	3	1/4	1 1/2	1/4	V	11	1 1/2	19	1 1/2	40 1/2	1 1/2	F	17 11/16	4	1/4	8	17 11/16	4	1/4	8	158	38
Sterling 5-Chain	3	1/4	1 1/2	1/4	V	11	1 1/2	19	1 1/2	40 1/2	1 1/2	F	56 1/2	3 1/2	1/4	2	34 11/16	4	1/4	1	158	38
Sterling 7½	3	1/4	1 1/2	1/4	V	11	1 1/2	19	1 1/2	40 1/2	1 1/2	F	56 1/2	3 1/2	1/4	2	34 11/16	4	1/4	1	158	38
Stewart M7–2	3	1/4	....	1 1/16	....	.....	.....	.....	.....	.....	.....	.....	50 5/8	2	1/4	2	8	5	1/4	2	132 3/4	32
Stewart M15–1	3	1/4	....	1	....	.....	.....	.....	.....	.....	.....	.....	41 3/8	2	1/4	2	22 3/4	2	1/4	1	99 1/2	32
Stewart M9–1½	3	1/4	....	1	....	.....	.....	.....	.....	.....	.....	.....	48 1/2	2	1/4	2	8	5	1/4	2	119 1/4	32
Stewart M10–3½	3	1/4	....	1 3/8	....	.....	.....	.....	.....	.....	.....	.....	60	3	1/4	2	8	5	1/4	2	139 3/4	32
Stewart M7X	3	1/4	....	1 1/16	....	.....	.....	.....	.....	.....	.....	.....	50 5/8	2	1/4	2	8	5	1/4	2	132 3/4	32
Stewart M10X	3	1/4	....	1 3/8	....	.....	.....	.....	.....	.....	.....	.....	60	3	1/4	2	8	5	1/4	2	138	32
Stoughton C–¾	4	1/4	1	1 3/8	V	13	2 1/4	18	2 1/4	30	1	F	56 1/2	2 1/2	1/2	2	55	2 1/4	1/2	2	92 1/2	34
Stoughton A–1	4	1/4	1	1 3/8	V	18	1 1/4	15	1 1/4	39 1/4	1 1/2	F	16 3/4	1 3/4	1/4	4	16	1 3/4	1/4	4	88	34
Stoughton B–1½	4	1/4	1	1 3/8	V	18	1 1/4	15	1 1/4	39 1/4	1 1/2	F	19	2	1/4	4	19	2	1/4	4	116	34
Stoughton D–2	4	1/4	1 1/4	1 5/8	V	9	1 1/2	15	1 1/4	40	2	F	23	2 1/4	1/4	4	23	2 1/4	1/4	4	116	34
Stoughton F–3	4	1/4	1 1/4	1 5/8	V	12	1 1/2	15	1 1/4	42	2	F	23	2 1/4	1/4	4	23	2 1/4	1/4	4	127	36
Super Truck 50	3	1/4	1 1/4	1 1/16	V	19	1 3/4	19	1 1/2	37 1/2	1 7/8	F	51 1/2	2 1/4	1/4	2	51 1/2	2 1/4	1/4	2	135	34
Super Truck 70	3	1/4	1 1/4	1 1/16	V	19 1/2	1 3/4	19	1 1/2	37 1/2	1 7/8	F	55 1/2	2 1/2	1/4	2	55 1/2	2 1/2	1/4	2	144	34
Super Truck 100	3	1/4	1 1/2	1 1/16	V	6	1 3/4	19	1 3/4	42	1 7/8	F	68	3	1/4	2	51 1/2	3	1/4	2	144	34
Superior D–1	3	1/4	1 1/4	1 1/4	....	11	2	10	.....	39	1	F	45	2 1/2	1/4	2	44	2 1/4	1/4	2	97 3/4	34
Superior E–2	3	M	1 1/4	1 1/16	....	8 1/2	1 1/2	15	1 1/4	29	1	F	54	2 1/2	1/4	2	53 1/2	2 1/2	1/4	2	114	34
Thomart Speed	3	1/4	1 1/4	1 1/16	V	9	1 1/4	7 1/4	1 1/4	36 1/2	2	F	19 3/8	1 3/4	1/4	4	19 3/8	1 3/4	1/4	4	102	34
Tiffin GW–1½	3	1/4	1 1/4	1 1/4	V	.....	.....	.....	.....	.....	.....	.....	46	2	1/4	1	46	2	1/4	1	114	35
Tiffin MW–2½	3	1/4	1 1/4	1 1/4	V	.....	.....	.....	.....	.....	.....	.....	52	2 1/4	1/4	1	52	2 1/4	1/4	1	138 1/2	32 3/4
Tiffin F–35–3½	3	1/4	1 1/4	1 1/4	V	.....	.....	.....	.....	.....	.....	.....	58	2 1/2	1/4	1	58	2 1/2	1/4	1	151	35 1/2
Tiffin TW–5	4	1/4	1 1/2	1 1/2	V	.....	.....	.....	.....	.....	.....	.....	68	3	1/4	1	68	3	1/4	1	156	38 1/2
Tiffin UW–6	4	1/4	1 1/2	1 1/2	V	.....	.....	.....	.....	.....	.....	.....	68	3	1/4	1	68	3	1/4	1	156	38 1/2
Titan 3½	4	1/4	1 1/2	1 3/4	....	.....	.....	.....	.....	.....	.....	.....	60	2 1/4	1/4	2	14	4 1/2	1/4	2	144	34
Titan 5–6	4	1/4	1 1/2	1 3/4	....	.....	.....	.....	.....	.....	.....	.....	90	2 1/4	1/4	2	14	4 1/2	1/4	2	144	34
Titan 2½	4	1/4	1 1/4	1 1/4	....	.....	.....	.....	.....	.....	.....	.....	54	2 1/2	1/4	2	26	4	1/4	1	144	32
Tower J–1½	3	1/4	1 1/4	1 1/4	....	.....	.....	.....	.....	.....	.....	.....	11 3/4	3 1/4	1/4	4	11 3/4	3 1/4	1/4	4	135 1/4	32 1/2
Tower H–2½	3	1/4	1 1/4	1 1/4	....	.....	.....	.....	.....	.....	.....	.....	13 1/16	3 1/2	1/4	4	13 1/16	3 1/2	1/4	4	138 3/4	32 1/2

Replacement Table—Continued

Name, Model and Tonnage	ENGINE												BRAKE LINING								FRAME	
	Piston Rings		Carburetor			Upper Hose		Lower Hose		Fan Belt			Service				Emergency				Length	Width
	No. per Cyl.	Width	Outlet Diameter	Inlet Diameter	Vertical or Horizontal	Length	Width	Length	Width	Length	Width	Type	Length	Width	Thickness	No. of Pieces	Length	Width	Thickness	No. of Pieces	Back of Driver's Seat	Over All
Tower G–3½	3	⅛	1½	1½	...	10½	2	10	2	41¼	1¼	F	15⅝	3¾	¼	4	15⅝	3¾	¾	4	152	37
Traffic C–4000	1	⅛	1	⅛	H	10½	2	10½	2	41¼	1¼	F	43½	2½	⅛	2	38	1¾	⅛	2	120¾	42
Traffic 6000	3	⅛	1	⅛	H	10½	2	10½	2	41¼	1¼	F	...	...	...	...	...	...	...	...	120¾	34
Traffic Speedboy	3	⅛	1	⅛	H	10½	2	10½	2	41¼	1¼	F	43½	2½	⅛	2	38	1¾	⅛	2	86	34
Transport 15–1	3	⅛	1	1	H	10¾	2	13	2	40⅞	1¼	F	48	2½	⅛	2	46⅝	2	⅛	2	98⅛	34
Transport 25–1½	3	⅛	1	1	V	12	2	12	2	36½	1¼	F	48½	2	⅛	2	46½	1½	⅛	2	100⅞	34
Transport 35–2	3	⅛	1	1	V	10¾	2	13	2	40⅞	1¼	F	11	3	⅛	2	46½	2½	⅛	2	116⅞	34
Transport 60–3½	4	¼	1¼	1¼	V	9¼	2	10	1¼	32¾	2	F	10¼	3	⅛	2	48½	2½	⅛	2	152⅛	34
Transport 75–5	4	¼	1¼	1¼	V	12	2	16	1¼	35⅞	2	F	11⅞	3	⅛	4	58	2½	⅛	2	150⅛	36½
Traylor B–1½	4	¼	1	....	V	.....	.....	.....	.....	38	1	F	50	2	¼	2	50	2	¼	2	117	34
Traylor C–2–2½	4	¼	1¼	....	V	.....	.....	.....	.....	36	2	F	50	2	¼	2	50	2	¼	2	122	34
Traylor D–3–3½	4	¼	1¼	....	V	.....	.....	.....	.....	36	2	F	56½	2¼	¼	2	56½	2¼	¼	2	142	34
Traylor F–5–6	4	¼	1¼	....	V	.....	.....	.....	.....	37	2	F	59	2½	...	2	59	2½	...	2	165	35
Triangle AA–1	3	⅛	1	1	H	17	2	17	2	34	1	F	22	2½	⅛	1	41	2	⅛	2	94	35
Triangle A–1½	3	¼	1	1	V	14	1¼	14½	1¼	39¼	1½	F	7	4	⅛	2	49	2	⅛	2	126	34
Triangle B–2½	3	¼	1¼	1¼	V	18	1½	18	1¼	39¼	1½	F	7	4	⅛	2	52	3	⅛	2	132	34
Triangle C–2	3	¼	1	1	V	14	1¼	14½	1¼	39¼	1½	F	7	4	⅛	2	52	3	⅛	2	129	34
Triumph HB–2½	4	¼	.....	.....	V	9	1¾	17	1¼	32½	2	F	46	2½	⅛	2	32	2½	⅛	2	120	34½
Triumph HC–2	4	¼	.....	.....	V	9	1¾	17	1¼	32½	2	F	46	2½	⅛	2	32	2½	⅛	2	120	34½
Ultimate A–2	4	¼	1¼	1⅝	V	11	2	8	1¼	34	2	F	20	2¼	¼	2	45	2	¼	2	126	32¾
Ultimate AJ2	4	¼	1¼	1⅝	V	11	2	8	1¼	34	2	F	20	2¼	¼	2	45	2	¼	2	126	32¾
Ultimate AJL–2	4	¼	1¼	1⅝	V	11	2	8	1¼	34	2	F	20	2¼	¼	2	45	2	¼	2	150	32¾
Ultimate B–3	4	¼	1¼	1⅝	V	11	2	8	1¼	34	2	F	51	2¼	¼	2	51	2¼	¼	2	144	32¾
Ultimate BL3	4	¼	1¼	1⅝	V	11	2	8	1¼	34	2	F	51	2¼	¼	2	51	2¼	¼	2	192	32¾
Ultimate D–5	4	¼	1¼	1⅝	V	11	2	8	1¼	34	2	F	51	2¼	¼	2	51	2¼	¼	2	180	37½
Union F–2½	3	¼	1¼	1¼	V	20	1¾	19½	1½	37¾	2	F	55	3	⅛	1	50	2	⅛	1	133½	32
Union FW–2½	3	¼	1¼	1¼	V	20	1¾	19½	1½	37¾	2	F	26	4½	¼	1	52	3	¼	1	133½	32
Union H–4	3	¼	1¼	1¼	V	20	1¾	19½	1½	37¾	2	F	56¾	3½	⅛	1	32	4½	⅛	1	157½	34
Union HW–4	3	¼	1¼	1¼	V	20	1¾	19½	1½	37¾	2	F	26	4½	¼	1	24	4	¼	2	157½	34
Union JW–6	3	¼	1½	2	V	20	1¾	19½	1½	41½	2	F	34	4	¼	1	28	5	¼	2	190	36
United 1½	4	¼	1	1⅛	H	15	2½	16	1½	37½	2	F	48	2	⅛	1	48	1½	⅛	1	120	33
United 2½	4	¼	1¼	1⅛	H	7	2½	12	1½	37½	2	F	49	3	⅛	1	49	2½	⅛	1	Opt	33
United 3½	4	¼	1¼	1⅛	H	7	2½	7	1½	37½	2	F	62	3	⅛	1	58	2½	⅛	1	Opt	34
United 5	4	¼	1½	1⅛	H	14½	2½	12	1½	37½	2	F	82½	2¼	⅛	1	88½	2½	⅛	1	Opt	38
U.S.N.–1½	3	M	1	⅛	H	11½	2	9	1¼	37	1¼	F	50½	2½	⅛	2	46½	1½	⅛	2	120	34
U.S.N.W.–1½	3	⅛	1	⅛	H	11½	2	9	1¼	37	1¼	F	19½	2	⅛	4	19½	2	⅛	4	120	34
U.S.R.–2½–3	3	⅛	1¼	⅛	V	10	1¼	10	1¼	35	1¼	F	21	2¼	¼	4	21	2¼	¼	4	144	34
U.S.S.–3½–4	3	⅛	1¼	¼	V	9	1½	8	1½	37	1¼	F	50	2½	¼	2	50	2½	¼	2	156	36
U.S.T.–5–6	4	¼	1½	¼	V	15	2	13	1½	38¾	2	F	62	3	¼	4	33	4	¼	1	168	36
U.S.U.–1¼	4	⅛	1	⅛	V	11½	1¾	11½	1¼	33	1¼	F	50½	2½	⅛	2	46½	1½	⅛	2	108	32
Velie 46–1½	3	M	1	⅛	V	9½	2¼	12¾	1½	40	¾	V	54	2½	⅛	2	52⅛	2¼	⅛	2	120	31
Vim 29½	3	⅛	⅞	...	...	.....	.....	.....	.....	30¾	1	F	14⅞	1½	⅛	4	14⅞	1½	⅛	4	64	30
Vim 30½	3	⅛	⅞	...	...	.....	.....	.....	.....	30¾	1	F	14⅞	1½	⅛	4	14⅞	1½	⅛	4	83½	30
Vim 31–1	4	⅛	1	...	...	.....	.....	.....	.....	40	1	F	18	2	⅛	4	18	2	⅛	4	92	32
Vim 22–2	4	⅛	1	...	...	.....	.....	.....	.....	40	1	F	42⅝	2	¼	2	42⅝	2	¼	2	120⅝	34
Vim 23–3	5	⅛	1¼	...	...	.....	.....	.....	.....	40	1	F	48⅞	2¼	¼	2	48⅞	2¼	¼	2	160	34
Walker M1½	...	...	...	...	...	.....	.....	.....	.....	.....	.....	...	43	2¼	⅛	2	14	1¾	⅛	4	90	32
Walker P3½	...	...	...	...	...	.....	.....	.....	.....	.....	.....	...	53¼	3	⅛	2	19¼	2½	⅛	4	140	35
Walker N5	...	...	...	...	...	.....	.....	.....	.....	.....	.....	...	53¼	3	⅛	2	19¼	2½	⅛	4	162	35
Walker Model 22	...	...	...	...	...	.....	.....	.....	.....	.....	.....	...	45½	2½	⅛	2	16	2	⅛	4	99	32
Walker Model 42	...	...	...	...	...	.....	.....	.....	.....	.....	.....	...	53¼	3	⅛	2	19¼	2½	⅛	4	120	32
Walker Johnson A–2	3	⅛	1	1	V	11½	2	7½	1¾	37	1	F	12	3¼	¼	4	12	3¼	¼	4	117	32
Walker Johnson B3	4	¼	1¼	1¼	V	10	2	8	1¼	33½	1¼	F	13	3½	¼	4	13	3½	¼	4	133	32 ⅛
Walter S–5	3	¼	½	2	V	10	1½	18	1½	39	1½	F	15	5	¼	4	57	2½	¼	2	150	36
Ward LaFrance 2B–2½–3½	3	¼	1¼	1½	V	7	1½	16	1½	41½	1½	F	13	3½	¼	4	13	3½	¼	4	137½	33
Ward LaFrance 4A–3½–5	3	¼	1⅜	1¾	V	8½	1½	18	1½	41½	1½	F	15½	3¾	¼	4	15½	3¾	¼	4	170	37
Ward LaFrance 5A–5–7	3	¼	1½	1¾	V	9½	1½	18	1½	41½	1½	F	18	4	¼	4	18	4	¼	4	170	37
Watson B1	4	¼	1	1⅜	V	16½	1¼	4	1¼	40	1½	F	42	1¾	⅛	2	41	1¾	⅛	2	90⅛	30
Watson N–3½	3	⅛	1¼	1½	V	16½	1¼	3	1¼	34	1¼	F	62	2½	¼	2	47	2½	¼	2	147	37
Watson U–5	3	⅛	1½	1½	V	16½	1¼	3	1¼	38½	1¼	F	15½	3¼	¼	4	15½	3¼	¼	4	.....	36
White Hickory H–1½	3	⅛	1¼	1	....	11	2	8	1¼	41	⅝	V	13½	3½	¼	4	13½	3½	¼	4	116¼	32
White Hickory H–1½	3	⅛	1¼	1	....	11	2	8	1¼	41	⅝	V	11¾	3¼	¼	4	11¾	3¼	¼	4	116¼	32
White Hickory E–1	3	⅛	1¼	1	....	11	2	8	1¼	41	⅝	V	11	3	¼	4	11	3	¼	4	92¼	32½
White Hickory K–2½	3	⅛	1½	1¼	....	9	1½	8	1¼	33¼	1¼	F	13½	3½	¼	4	13½	3½	¼	4	150	32
Wichita K–1	3	¼	1½	1⅜	V	18½	1¼	12	1¼	52¾	1½	F	19½	2	⅛	4	19½	2	⅛	4	127½	30
Wichita M–2	3	¼	1½	1⅜	V	18½	1¼	12	1¼	52¾	1½	F	49	2	⅛	2	49	2	⅛	2	126½	30
Wichita RX–3	3	¼	1¼	1¾	V	11	1½	11	1½	40	1½	F	54	2¼	⅛	2	54	2¼	⅛	2	130	30
Wichita O–4	3	¼	1½	1¾	V	11	1½	11	1½	40	1½	F	56½	2½	¼	2	56½	2½	¼	2	152½	36
Wichita S–5	3	¼	1½	1¾	V	11	1½	11	1½	40	1½	F	66	3	¼	2	66	3	¼	2	163½	36
Wilcox AA–1	3	¼	1	...	...	.....	.....	.....	.....	.....	.....	...	47	2½	⅛	2	33¼	2½	⅛	2	96	34
Wilcox B–1½	3	¼	1¼	...	...	.....	.....	.....	.....	.....	.....	...	47	2½	⅛	2	33¼	2½	⅛	2	132	33
Wilcox C–2½	3	¼	1¼	...	...	.....	.....	.....	.....	.....	.....	...	57½	2½	⅛	2	42½	2½	¼	2	141	33
Wilcox E–3½	3	¼	1¼	...	...	.....	.....	.....	.....	.....	.....	...	57½	2½	¼	2	42½	2½	¼	2	156	33
Wilcox F–5	3	¼	1½	...	...	.....	.....	.....	.....	.....	.....	...	69⅜	3½	¼	2	52	3½	¼	2	148½	36
Wilson 1½	4	⅛	...	1	...	.....	.....	.....	.....	.....	.....	...	39½	1¾	⅛	2	39½	1¾	⅛	2	120	33
Wilson 2½	4	⅛	...	1¼	...	.....	.....	.....	.....	.....	.....	...	13¼	3½	⅛	4	13¼	3½	⅛	4	126	33
Wilson 3½	4	⅛	...	1½	...	.....	.....	.....	.....	.....	.....	...	16	3¾	⅛	4	16	3¾	⅛	4	147	38
Wilson 5	4	⅛	...	1½	...	.....	.....	.....	.....	.....	.....	...	18	4	⅛	4	18	4	⅛	4	147	38¼
Winther 751–1	3	¼	1	....	H	15¾	2	17	2	36 ⅛	1	F	42	2	⅛	2	24	2	⅛	1	102	30
Winther 39–1½	3	¼	1¼	....	V	10	1¾	4⅛	1½	33¼	1¼	F	50	2¼	¼	2	22½	2¼	¼	1	120	30
Winther 430–1½	3	¼	1¼	....	V	11¼	1½	11½	1¼	30⅝	1½	F	50	2¼	¼	2	22½	2¼	¼	1	120	30
Winther 450 2½	3	¼	1¼	....	V	11½	1½	6½	1½	37½	1¼	F	52	3	¼	2	22½	2¼	¼	2	120	30
Winther 50–2½	3	¼	1¼	....	V	17⅞	1¾	8	1½	42½	2	F	52	3	¼	2	50	2¼	¼	2	58	33
Winther 51–2½	3	¼	1¼	....	V	17⅞	1¾	8	1½	42½	2	F	52	3	¼	2	50	2¼	¼	2	144	33
Winther 70–3½	3	¼	1¼	....	V	17⅞	1¾	8	1½	42½	2	F	62	3	¼	2	60	2½	¼	2	156	33
Winther 109–5	3	¼	1½	....	V	21½	1¾	8	1½	42½	2	F	93	2¼	¼	2	93	2¼	¼	2	156	33
Winther 140–7	3	¼	1½	....	V	12	1¾	6	1¾	42¼	2	F	93	2¼	¼	2	93	2¼	¼	2	156	33
Wisconsin 2 (Loganville)	3	¼	1¼	1¼	H	17	2	17	2	34	¼	F	58	2½	¼	2	56½	2¼	¼	2	114	34
Wisconsin 2½ (Loganville)	3	⅛	1¼	1¼	V	12	1½	10	1¼	40	⅝	V	58	2½	¼	2	56½	2¼	¼	2	120	34
Witt Will N–1½	3	⅛	1¼	1¼	V	8	1½	12	1¼	31	1¼	F	48	3¼	¼	4	48	3¼	¼	4	Opt	32
Witt Will P–2	3	⅛	1¼	1¼	V	8	1½	12	1¼	31	1¼	F	52	3½	¼	4	52	3½	¼	4	Opt	32
Wolverine J–1	4	⅛	1	1¼	V	9½	1½	11½	1½	42	1½	F	42½	2½	¼	2	38	1¾	¼	2	110	34½
Wolverine J–1½	4	⅛	1	1¼	V	9½	1½	11½	1½	42	1¼	F	51	3	¼	2	42	2	¼	2	120	34½
Wolverine J–2	4	⅛	1	1¼	V	9½	1½	11½	1½	42	1¼	F	51	3	¼	2	42	3	¼	2	132	34½
Wolverine K–3	4	¼	1¼	1¼	V	9½	1½	11½	1½	42	1½	F	55	3	¼	2	47½	2	¼	2	153	34
Wolverine L 5	4	¼	1¼	1¼	V	9½	1½	11½	1½	44	1½	F	61½	3	¼	2	58	2½	¼	2	174	35⅛
Yellow Cab M22—¾	3	⅛	1	⅛	V	7½	2	9⅝	2	38½	⅝	V	49	2½	¼	2	45	2½	¼	2	60	43
Yellow Cab M42–1¼	3	⅛	1	⅛	V	7½	2	9⅝	2	38½	⅝	V	11	3	¼	4	11	3	¼	4	92	32

KEY OF ABBREVIATIONS

Note: Numerals on This Page Correspond With Numerals at Head of Specification Columns on Page Following. In All Specifications—O, Own; Op or Opt, Optional

Engine:
Beav—Beaver
Bud—Buda
Cont—Continental
Dodge—Dodge Bros.
GBS—Golden, Belknap & Swartz
Gr-B—Gray-Beal
Her—Hercules
Hig—Highway
Hin—Hinkley
HSp—Herschell-Spillman
1 LeR—Le Roi
Lib—Liberty
LMF—Light Mfg. & Fdy.
Lyco—Lycoming
Mid—Midwest
Ster—Sterling
Sup—Supreme
TC—Twin City
Vict—Victory
Wau—Waukesha
Wei—Weidely
Wis—Wisconsin

Valve Arrangement:
H—Overhead
2 L—ELL-Head
S—Sleeve
T—TEE-Head

How Cooled:
A—Air
B—Pump & Thermo
3 C—Centrifugal
G—Gear Pump
T—Thermo-Syphon

Radiator (Make):
BW—B & W
Brm—Brenem
Bus—Bush
Can—Candler
Chic—Chicago
Eag—Eagle
EM—English-Mersick
Eur—Eureka
Fed—Fedders
Flex—Flexo
GO—G. & O.
Har—Harrison
Hoo—Hooven
4 Idl—Ideal
Jam—Jamestown
Kue—Kuenz
Liv—Livingston
Lng—Long
McC—McCord
May—Mayo
Mod—Modine
Per—Prefex
R-T—Rome-Turney
S-W—Sparks-Withington
Spar-Spartan
Spec—Special
Spli—Splitex
Stan—Standard

Radiator (Type):
C—Cellular
Fin—Fin Tube
5 H—Honeycomb
PT—Plain Tube
Whee—Wheeler
ZZT—Zig Zag Tube

Lubrication:
FS—Force and Splash
6 F—Force Feed
S—Splash

Carburetor:
B&B—Ball & Ball
Bent—Bennett
Cart—Carter
Eag—Eagle
7 Ens—Ensign
Flch—Fletcher
Holl—Holley
John—Johnson
King—Kingston
Mar—Marvel
Mas—Master
Mill—Miller
Rayf—Rayfield
Scoe—Scoe
Strm—Stromberg
Shk—Shakespeare
Sheb—Schebler
Stew—Stewart
Till—Tillotson
Zen—Zenith

Fuel Feed:
8 G—Gravity
P—Pressure
V—Vacuum

Governor:
Con—Continental
Del—Delaney
Dup—Duplex
Hin—Hinkley
McC—McCanna
Mer—Merrill
9 Mon—Monarch
Mue—Mueller
Phar—Pharo
Pier—Pierce
Rug—Ruggles
Sim—Simplex
Wau—Waukesha

Clutch (Make):
B B—Borg & Beck
B-Li—Brown-Lipe
Covt—Covert
Det—Detlaff
DG—Detroit Gear & Mach.
Dod—Dodge Bros.
Full—Fuller
10 GB&S—Golden, Belknap & Swartz
Hart—Hartford
Hoos—Hoosier
HS—Hele-Shaw
M-E—Merchant & Evans
Munc—Muncie
M-P—Muncie Products
T-D—Twin Disc
W-C—Warner Corporation
W-Gr—Warner Gear

Clutch (Type):
C—Cone
D—Disc
11 DP—Dry Plate
DD—Dry Disc
Fr—Friction
WP—Wet Plate
WD—Wet Disc

Ignition System:
Amr—American Swiss
Apo—Apollo
AtK—Atwater Kent
AuL—Auto-Lite
Bos—Bosch
Ber—Berling
Con—Connecticut
Del—Delco
Eis—Eisemann
12 Kin—Kingston
KW—K. W. Ignition Co.
Lor—Louraine
NE—North East
POL—Prest-O-Lite
Rm—Remy
Sim—Simms
Spl—Splitdorf
Tea—Teagle
Wag—Wagner
Wes—Westinghouse

Engine Starter:
AC—Allis-Chalmers
AK—Atwater Kent
AL—Auto-Lite
Bj—Bijur
Bos—Bosch
13 DL—Delco
Dy—Dyneto
GD—Gray & Davis
LN—Leece-Neville
NE—North East
RE—Remy
USL—U. S. L.
W—Westinghouse
Wg—Wagner

Gearset:
B-Li—Brown-Lipe
Cott—Cotta
Covt—Covert
D-Sea—Driggs-Seabury
Det—Detroit
Dod—Dodge Bros.
Dun—Dundore
14 Durst—Durston
Full—Fuller
G-Le—Grant Lees
MM—Mechanics Mach. Co.
Munc—Muncie
M-P—Muncie Products
Rock—Rockford
W-C—Warner Corporation
W-Gr—Warner Gear

Location of Gearset:
A—Amidships
15 J—Unit with jackshaft
R—Rear
U—Unit with engine

Universal:
A-B—Easton Mch. Co.
Acm—Acme
Arv—Arvac
Bear—Bearings Co.
Bld—Blood-Brothers
Cli—Climax
Det—Detroit
Dit—Ditwiler
Flex—Flexite
Hart—Hartford
16 KB—Kinsler-Bennett
Mech—Mechanics
M-E—Merchant & Evans
Nor—Norwalk
Pet—Peters
Sned—Snead
Spic—Spicer
Ster—Sterling
Ther—Thermoid
UM—Universal Machine
UP—Universal Products
Var—Varied

Springs:
All—Alloy Steel
Am—Am. Auto Parts
Arm—Armstrong
Bea—Beans
Cham—Champion
Coop—Cooper
Del—Delany
Det—Detroit
GC—Garden City
Har—Harvey
Hig—Higgins
IC—Iron City
Jax—Jaxon
Kal—Kalamazoo
17 Lah—Laher
Lig—Liggett
Mar—Maremont
Math—Mather
Mer—Merrill
Nat—National
Pen—Penn
Per—Perfection
Row—Rowland
Shel—Sheldon
SP—Spring Perch
Stan—Stan-Par
Ster—Sterling
Tem—Temme
Tut—Tuthill
US—United States
Wis—Wisconsin

Final Drive:
B—Bevel Gear
C—Chain
18 I—Internal Gear
N—Concentric Spur
P—Spur
R—Double Reduction
S—Spiral Bevel
W—Worm

Rear Axle (Make):
Amr—American
Badg—Badger
Col—Columbia
Clark
Dun—Dunkirk
Eat—Eaton, Stan-Par
Fli—Flint
Hind—Hindley
IrM—Iron Mt.
Keno—Kenosha
LM—L M Axle
19 Rock—Rockford
Russ—Russel
Sals—Salisbury
Sav—Savage
Shel—Sheldon
Stn—Stanweld
Thom—Thomson
Tim—Timken
Torb—Torbensen
W-M—Weston-Mott
US—United States
Vul—Vulcan
Walk—Walker
Wis—Wisconsin

Rear Axle (Type):
Flot—Floating
D—Dead
20 ½-Fl—Semi-Floating
¾-Fl—¾-Floating

Steering Gear:
CAS—C. A. S. Products Co.
Dit—Ditwiler
Dod—Dodge Bros.
Gem—Gemmer
Jac—Jacox
21 KH—Keystone Hendley
Lav—Lavine
M-P—Muncie Products
Ros—Ross
Sag—Saginaw Products Co.
W-C—Warner Corporation
Woh—Wohlrab

Wheels:
Arc—Archibald
AuW—Auto Wheel
Bim—Bimel
Cla—Clark
C&M—Crane & McMahon
Day—Dayton
Det—Detroit
E&O—Eberly & Oris
Hay—Haynes
Hoo—Hoopes Brothers
Jon—Jones
Kel—Kelsey
MM—Michigan Malleable Iron Co.
22 Mot—Motor Wheel
Mut—Mutual
Nor—Northern
Pru—Prudden
Roy—Royer
Rus—Russell
Sal—Salisbury
Sch—Schwartz
Smi—Smith
Sta—Stanwell
StM—St. Mary
Stn—Standard
Wal—Walker
Wan—Wayne
W-L—Waterhouse & Lester
Wes—Western Wheel Co.

Rim Equipment:
Bak—Baker
Det—Detroit
Fir—Firestone
23 Gdy—Goodyear
Hay—Hayes
Jax—Jaxon
Kel—Kelsey
Ken—Kennedy

Commercial Car Specifications—Corrected Monthly

The Specifications, Chassis Prices, Etc., Are Corrected Each Month From Data Supplied Direct by the Makers. Gasoline Tractor-Trucks Will be Found at the End of Gasoline Commercial Cars

See Also Replacement Table in "Service and Repair Departments." Truck Frame Dimensions Are Included in Replacement Table

(Where prices are not given it is because we have been unable to get them from authoritative sources)

* An asterisk in front of the model name indicates that corrections have been made somewhere in the specifications since the previous month

Trade Name and Model	Chassis Price	ENGINE DETAILS: Make and Model Number 4 Cylinder unless otherwise noted	Bore and Stroke	N. A. C. C. Horsepower	Valve Arrange't	How Cooled	Radiator (Make)	Radiator (Type)	Lubrication	Carburetor	Fuel Feed	Governor (Make)	Clutch (Make)	Clutch (Type)	Ignition System	Engine Starter	GEARSET: Make	Location	Speeds	Universal (Make)	Springs (Make)	REAR AXLE: Final Drive	Make	Type	Total Gear Reduction in High	Total Gear Reduction in Low	Steering Gear (Make)	TIRES, WHEELS, RIMS: *Pneumatic †Dual Front	Rear	Wheels (Make)	Rim Equipment	Chassis Weight (Stripped)	Wheelbase
1000 Pounds		1			2	3	4	5	6	7	8	9	10	11	12	13	14	15		16	17	18	19	20			21			22	23		
Dort	685	Lyc K	3½x5	19.6	L	T	Fed	C	S	Cart	V	.....	Own	C	Con	Bos	Own	U	3	MM	Lig	S	Fli	¾ Fl	4.45	15.13	Sag	31x4*	31x4*	Imp	Cle	2015	105
Vim 29	1050	Own	3½x4½	15.6	L	T	McC	Fin	FS	Zen	G	.....	B.B.	DD	Wes	W	Own	U	3	Spic	Shel	W	Own	.....	5.5	.....	CAS	31x4*	31x4*	Hoo	Fir	2175	108
Vim 30	1175	Own	3½x4½	15.6	L	T	McC	Fin	FS	Zen	G	.....	B.B.	DD	Wes	W	Own	U	3	Spic	Shel	W	Own	.....	5.5	.....	CAS	32x4½*	32x4½*	Hoo	Fir	2290	127
1500 Pounds																																	
Acason Fast	.....	Own	3¾x5	22.5	L	C	.....	C	F	Sheb	V	.....	Full	D	Eis	W	Full	U	3	Bld	Det	W	Timk	½ Fl	6.25	25	Ros	34x5*	34x5*	Bim	.....	3080	142
*Brockway E	.....	Wis SU	4 x5	25.6	H	C	GO	C	FS	Strm	V	.....	B-Li	DD	Rm	LN	B-Li	U	3	M-E	Row	S	Col	Flot	5.13	20.5	Gem	33x5*	33x5*	.....	Fir	3450	135
Chevrolet G	745	Own	3 ⅛x4	21.7	H	B	Har	H	FS	Zen	V	.....	Own	C	Rm	AL	Own	...	3	Own	Arm	S	Own	½ Fl	5.42	18.9	M-P	31x4*	34x4½*	Hay	Jax	2167	120
Clydesdale 10	1485	Cont N	3¾x5	22.5	L	T	.....	PT	FS	Zen	V	.....	B.B.	DP	Bos	Bos	B-Li	U	3	Spic	Stan	B	Timk	½ Fl	5	16.4	Jac	34x5	34x5	.....	Fir	3100	138
*Dodge Brothers	730	Own	3⅞x4½	24	L	C	McC	PT	FS	Stew	V	..	Own	DD	NE	NE	Own	U	3	Own	Own	S	Own	½ Fl	4.16	19.4	Own	32x4*	32x4*	Kel	Kel	1992	114
Federal R-2	1375	Cont J-4	3¾x5	22.5	L	C	Own	Fin	F	Zen	V	.....	B.B.	DP	Eis	RE	Det	U	3	Pet	Det	W	Timk	½ Fl	5.6	17.4	Gem	33x5	33x5	Det	Det	2950	132
H. R. L.-L	2200	H-Sp 7000	3½x5	19.6	L	T	Fed	Fin	F	Zen	V	.....	Own	DP	Bos	GD	Covt	U	3	Spic	Shel	W	Wis	½ Fl	6.2	22.	Ross	34x4½*	35x5*	Sch	Gdy	3300	134
*International Speed Truck S	1250	Lyco-Int'l	3½x5	19.6	L	T	Lng	Fin	FS	Ens	G	.....	Mun	DP	Con	AL	Mun	U	3	Sned	Stan	I	Torb	D	6.3	.....	CAS	.....	.....	Opt	.....	2600	124
Moreland R-R	1595	Her O	4 x5	25.6	L	C	Own	C	F	Zen	G	.....	B-Li	DD	AuL	AuL	B-Li	U	3	Ther	US	B	Timk	½ Fl	5.5	28	Ros	34x5	34x5	.....	.....	3350	132
Ogden A2	.....	Cont N	3½x5	19.6	L	T	Chic	Fin	FS	Strm	V	.....	B-Li	DD	Spl	.....	B-Li	U	3	M-E	Tut	W	Timk	½ Fl	6.2	.....	Ros	34x5	34x5	Stn	.....	3100	125
Rainier R21	1970	Cont-N	3½x5	19.6	L	T	Har	H	FS	Zen	V	Mon	B-Li	DP	Eis	.....	B-Li	U	3	Hart	Per	W	Timk	½ Fl	7.2	23.9	Lav	35x5*	35x5*	.....	Fir	2350	125
*Republic Rapid Transit	1250	Lyco KB	3½x5	19.6	L	T	Own	C	FS	Strm	V	.....	Full	DD	AuL	AL	Full	U	3	Spic	Math	I	Torb	D	5.38	15.06	Jac	32x4½*	32x4½*	Mot	Fir	2650	124
Samson 15	595	Own	3 ⅛x4	21.8	H	C	Own	PT	FS	Zen	G	Mon	Own	D	Rm	AL	Own	A	3	Own	Own	S	Own	½ Fl	6.33	21.02	Own	32x4*	32x4*	Own	Hay	2366	118
*Service 12	.....	Mid 409	3¼x4½	16.9	H	I	Lng	Fin	F	Strm	G	.....	Hoos	DP	Rm	Rm	Det	U	3	M-E	Shel	B	Timk	½ Fl	6.88	22.1	Ros	32x4½*	32x4½*	Bim	Fir	2720	128
Stewart Utility Wagon	1245	Buda	3⅝x5¼	21	L	C	Bus	PT	F	Zen	G	.....	.....	DP	Rm	.....	.....	U	3	Spic	Det	I	Clark	D	5.5	16.99	Ros	34x4½*	34x4½	Way	Fir	3150	128
*Stoughton C	1240	.....	3½x5	19.6	L	T	.....	Fin	FS	Strm	G	.....	Det	DD	Wes	W	Own	U	3	Ther	Own	B	Col	Flot	5.87	23.5	Lav	34x4½*	34x4½*	Roy	Gdy	2480	131
Watson B	1865	Wau BUX	3¾x5½	22.5	L	P	GO	C	FS	Strm	G	Wau	B-Li	DP	Con	D	B-Li	U	3	M-E	Shel	W	Emp	½ Fl	6.2	20.7	Lav	35x5	35x5	Hoo	Fir	2900	128
White 15	2400	Own	3¾x5½	22.5	L	P	C	C	FS	Own	G	.....	Own	D	....	.....	Own	A	4	Own	.....	B	Own	½ Fl	.....	.....	Own	34x5*	34x5*	.....	Fir	3200	133
Yellow Cab M-22-¼	1590	Cont V-4	3¾x5	22.5	L	T	Lng	Fin	FS	Zen	G	.....	B-Li	DD	Bos	.....	B-Li	U	3	Spic	Math	B	Timk	.....	4.9	16.31	Gem	33x4½*	33x4½*	Stn	Fir	2400	117
1 Ton																																	
Acason R	.....	Wau B.U.X.	3¾x5¼	22.5	L	P	Can	C	S	Sheb	V	Wau	Full	.....	Eis	.....	Full	U	4	Bld	Det	W	Timk	½ Fl	7.20	34.5	Ros	36x3½	36x5	Bim	Opt	3650	142
Acme 20	.....	Cont N	3¾x5	22.5	L	T	GO	C	FS	Rayf	V	Dup	B.B.	DP	Eis	GD	Cott	U	3	Bld	Det	W	Timk	½ Fl	6.2	24.8	Ros	35x5*	35x5*	Bim	.....	3050	129
Apex GW	1750	Buda MU	3½x5½	21	L	T	GO	C	S	Strm	V	.....	Full	D	AuL	AL	Eull	U	3	Bld	Det	W	Timk	.....	6.25	.....	Lav	35x5*	35x5*	Roy	Fir	2650	130
Atlas Merchant's Dispatch	1185	Lyco	3½x5	19.6	L	T	Own	H	S	Strm	V	.....	B.B.	DD	AtK	Bj	Own	...	3	Ster	IC	W	Own	½ Fl	6	16.8	CAS	32x4½*	32x4½*	.....	.....	2650	130
Avery	.....	Own 6	3 x4	21.6	L	T	Own	C	S	Strm	V	Own	Own	DP	KW	W	Own	U	3	Pet	Math	I	Torb	D	8	26.66	Ros	34x5*	34x5*	StM	Gdy	2800	129
Bell M	1495	Buda	3⅝x5½	21	L	C	Chic	PT	F	Zen	V	.....	B.B.	DP	Eis	.....	Mun	U	3	Ther	Det	W	Timk	.....	7.2	.....	Dit	35x5	35x5	Bim	Fir	2500	126
Bessemer G	.....	Cont N	3½x5	19.6	L	T	Std	C	FS	Strm	G	.....	Full	DD	Bos	Bj	Full	U	3	Arv	Per	I	Torb	D	.....	.....	Ros	35x5	35x5	Sch	Fir	3000	124
Birch 1	1285	Viet	3½x5	19.6	L	T	Chic	PT	FS	Strm	G	.....	Full	DD	Con	.....	Full	U	3	UM	.....	I	Clark	D	.....	.....	Lav	32x3½*	32x4*	.....	.....	3200	132
Casco Model A	1785	Buda MU	3⅝x5½	21.2	L	C	GO	C	F	Zen	V	.....	Full	DD	Bos	Bos	Full	U	3	Spi	Stan	S	Col	½ Fl	5.85	23.46	Woh	34x5	34x5	Arc	Fir	3100	130
Chevrolet T	1125	Own	3 ⅛x5¼	21.7	H	C	Har	H	FS	Zen	G	Mon	Own	C	Rm	AL	Own	...	3	Arv	Arm	W	Own	½ Fl	7	24.67	M-P	33x4*	35x5*	Hay	Jax	2840	125
Clydesdale 10A	1585	Cont N	3¾x5	22.5	L	T	.....	PT	FS	Zen	V	.....	B.B.	DP	Bos	Bos	B-Li	U	3	Spic	Stan	W	Timk	½ Fl	6.75	22	Jac	34x5	34x5	.....	Fir	3100	138
Collier 18	.....	Cont N	3½x5	19.6	T	P	Lng	PT	S	Zen	V	Mon	Full	DP	Eis	.....	Full	U	3	UP	Math	W	Timk	½ Fl	7.75	31	Ros	34x4	34x5	Bim	Fir	3210	140
Corbitt E-22	1480	Cont N¾	3¾x5	22.5	L	T	McC	Fin	FS	Strm	V	.....	B-Li	DD	Eis	.....	B-Li	U	3	Hart	Shel	W	Shel	½ Fl	6	20	Ros	34x3½	34x4	Bim	Fir	3730	130
Day Elder AS	1600	Cont N	3¾x5	22.5	L	T	Bus	Fin	FS	Zen	G	.....	Covt	DD	Eis	.....	Covt	U	3	Hart	IC	W	Shel	½ Fl	6	21.96	Gem	35x5*	35x5*	Jon	Fir	3000	128
*Dearborn E (Speed)	1600	Buda MU	3½x5½	21	L	C	Chic	PT	F	Strm	V	.....	Full	DP	Con	Bos	Full	U	3	Hart	.....	W	Wis	½ Fl	6.2	18.6	Dit	35x5*	35x5*	.....	Fir	3280	133
*Defiance G	1695	Hig	3¾x5	22.5	L	P	Per	C	FS	Strm	V	.....	B.B.	DP	Eis	AL	G-Le	U	3	Arv	Det	B	Eat	.....	5.5	.....	Own	35x5*	35x5*	StM	Fir	2700	128
Denby 31	1485	Cont	3¾x5	19.6	L	T	Lng	PT	FS	Strm	G	.....	Full	DD	Eis	RE	Full	U	3	UP	Det	B	Col	½ Fl	5.85	23.46	Ros	35x5*	35x5*	Mot	Fir	2840	130
Diehl A	.....	Cont N	3½x5	19.6	L	T	.....	H	FS	Zen	G	.....	B.B.	.....	Sim	.....	Durs	...	3	KB	Mar	I	Torb	D	5.3	.....	Ros	34x4½*	35x5*	Sch	Fir	2400	115
Eugol	1795	Buda MU	3½x5½	21	L	C	Chic	PT	F	Strm	V	.....	UC	DD	Wes	W	UC	U	3	Pet	Math	W	Timk	½ Fl	6.25	30.3	Ros	34x5*	34x5*	Bim	Fir	3500	135
*Federal SD	1800	Cont J-4	3¾x5	22.5	L	C	Own	Fin	F	Zen	V	Phar	B.B.	DP	Eis	.....	Det	A	3	Spic	Math	W	Timk	½ Fl	7.2	20.65	Gem	35x5*	36x6*	Det	Det	3600	132
Ford T	285	Own	3¾x4	22.5	L	C	Own	Fin	S	.....	G	.....	Own	.....	Own	....	Own	U	2	Own	Own	W	Own	½ Fl	Opt	19.9	Own	30x3½*	32x4½	.....	.....	1430	124
Forschler A	.....	Cont N	3½x5	19.6	L	C	EM	.....	FS	Zen	V	Dup	Full	.....	Bos	Op	Full	...	3	Hart	Own	W	Shel	.....	.....	.....	Ros	34x3	34x4	.....	.....	3450	120
Fulton A	1495	H-Sp-7000	3½x5	19.6	L	C	Liv	H	FS	Cart	G	....	DP	B.B.	Ber	W	Durs	U	3	Spic	Row	B	Col	.....	6.8	.....	Lav	35x5	35x5	Hoo	Fir	2800	130
Garford 15	1590	Buda MU	3⅝x5½	21	L	T	Lng	PT	F	Strm	G	.....	.....	DD	AtK	AK	Own	U	3	Spic	Per	W	Timk	½ Fl	6.25	.....	Gem	34x5*	34x5	.....	.....	3500	132
Gary F	1675	Buda WU	3¾x5	22.5	L	T	Chic	Fin	S	Mas	G	Pier	Full	DD	Eis	.....	Full	U	3	Hart	Tut	W	Timk	½ Fl	.....	.....	Ros	36x3½	36x5	Pru	.....	3200	130
G. M. C. K-16	1295	Own	3½x5½	19.6	L	T	Own	Fin	F	Mar	G	Own	Own	DD	Eis	Ow	Own	U	3	UM	Det	B	Own	¾ Fl	6	21.9	Own	34x5*	34x5*	Kel	.....	3300	132
Graham Brothers	1265	Dodge	3⅞x4½	24	L	C	McC	PT	FS	Stew	V	.....	Dod	DD	NE	NE	Dod	U	3	Var	Det	S	Own	½ Fl	6.28	29.29	Dod	33x4½*	34x5*	.....	.....	2515	140
Gramm-Pioneer 10 Speed T	1365	Lyco	3½x5	19.6	L	T	Own	Fin	S	Strm	G	.....	B.B.	DP	Con	AL	.....	.....	.....	Own	Per	B	Sals	¾ Fl	5.75	21	Ros	33x5*	33x5*	.....	Fir	2370	129
Higrade A18	2100	Cont N	3½x5	19.6	L	C	Per	PT	FS	Zen	V	Dup	Full	DD	Sim	AL	Full	U	3	Bld	Per	W	Shel	.....	7.7	22.75	Lav	35x5	35x5	Det	Fir	2700	115
Independent B (Iowa)	1665	Cont N	3½x5	19.6	L	C	GC	PT	FS	Strm	V	.....	Full	DD	Bos	....	Full	U	3	Bld	GC	I	Russ	D	7	25	Lav	34x3	34x4	StM	Fir	3480	135
*International 21	1550	Own	3½x5¼	19.6	L	C	Own	Fin	FS	Ens	G	.....	Own	DP	Bos	Own	Own	A	3	Own	.....	I	Own	D	7	25	Own	.....	.....	Own	.....	3030	118
Kearns	1150	H-Sp. 7000	3½x5	19.6	L	T	Own	H	FS	Zen	V	Pier	B.B.	DD	Ber	Dy	G-Le	U	3	M-E	Math	I	Torb	D	6.3	24.	Lav	32x4½*	32x4½*	.....	Fir	3000	118

Kissel Express	1585	Own 80000	3⅞x5½	24.1	L	C	McC	PT	S	Strm	V	.....	W-Gr	DP	Rm	.....	W-Gr	U	3	Spic	Math	W	Timk	Flot	5.17	18.9	Jac	34x5*	34x5*	StM	.....	3780	140
Kleiber AA	.....	Cont J-4	4⅛x5¼	27.2	L	C	Per	C	FS	Strm	G	Sim	.....	DD	Bos	.....	B-Li	U	3	Spic	Shel	W	Timk	½Fl	7.1	31.	Ros	34x3½	34x5	W-L	.....	4200	130
Larrabee-Deyo X-2	1725	Con 7R	3¼x4½	24.3	L	C	Fed	Fin	F	Zen	G	.....	B-Li	DD	Bos	Bos	B-Li	U	3	Nor	Shel	B	Shel	¾Fl	5.75	25.5	Gem	34x5	34x5	.....	Fir	3350	138
Luedinghaus C	1695	H-Sp 7000	3½x5	19.6	L	T	Own	PT	FS	Sheb	G	.....	B.B.	D	Wei	W	G-Le	U	3	Spic	Tut	W	Wis	½Fl	6.2	18.32	Lav	35x5*	35x5*	StM	.....	2850	130
Menominee Hurryton	1650	Wis SU	4 x5	25.6	H	C	Own	C	F	Strm	G	.....	Full	DP	Eis	Bos	Full	U	3	Spic	Per	S	Timk	½Fl	4.58	18.3	Ros	34x5	34x5	Stn	Fir	3500	132
Moreland BX	1980	Her O	4 x5	25.6	L	C	Own	C	F	Zen	P	.....	B-Li	DD	AuL	AL	B-Li	U	3	Ther	US	W	Timk	½Fl	7	28	Ros	36x3½	36x6	Smi	.....	3900	132
Napoleon 9	1535	Vict T	3½x5	19.6	H	T	Own	PT	F	Sheb	G	.....	Full	DD	Con	AL	Full	U	3	Bld	Math	I	Clark	D	6.1	18.1	Lav	35x5*	35x5*	Roy	Fir	3200	133
Nash 2018	1595	Own-4	3¾x5¼	22.5	L	C	.....	PT	F	Strm	G	Sim	B.B.	DP	Eis	AL	.....	U	3	Own	Har	I	Clark	D	6.8	21.85	Lav	34x3	34x4	AuW	.....	3400	130
Norwalk	1595	Lyco K	3½x5	19.6	L	T	Stan	C	FS	Zen	V	.....	B.B.	D	Del	Dy	G-Le	...	3	UM	Stan	W	Stan	¾Fl	7.75	......	CAS	34x3½	34x4	E&O	Fir	2940	130
*Oldsmobile	1095	O	3 11/16x5¼	21.7	H	P	Har	C	FS	Zen	V	.....	B.B.	D	Rm	AL	W-Gr	U	3	Spic	Per	I	Torb	D	6.5	22.8	Jac	35x5*	35x5*	AuW	Jax	2580	128
Parker C22	1875	Wau BUX	3¾x5¼	22.5	L	C	Own	PT	S	Strm	V	Wau	B-Li	DD	Eis	W	B-Li	U	3	Bld	Tut	W	Timk	½Fl	6.2	25.4	Lav	34x5	34.5	Bim	.....	3400	130
*Patriot Revere	1295	Cont N	3¾x5	22.5	L	T	Own	C	FS	Strm	V	.....	B.B.	DD	AtK	Bj	Cont	A	3	Ther	Mar	W	Dun	½Fl	6.2	22.69	CAS	35x5	35x5	Bim	Gdy	2800	129
Penn	1350	Buda MU	3⅝x5⅛	21	L	C	GO	PT	FS	Zen	V	.....	Full	DP	Bos	Bos	Full	U	3	M-E	Math	B	Sals	¾Fl	5.71	......	Ros	34x5	34x5	Smi	Fir	.....	130
Pioneer AA, (Chicago)	1550	GBS	3¾x4¼	22.5	L	T	Own	H	F	Zen	V	.....	DG	D	Bos	AL	G-Le	U	3	Ther	GC	W	IrM	¾Fl	6.1	25.1	Wol	32x4½*	32x4½*	Bim	Fir	2500	132
*Rainier R-29	2150	Cont N	3¾x5	19.6	L	T	Har	H	FS	Zen	V	Mon	B-Li	DP	Eis	.....	B-Li	U	3	Hart	Per	W	Timk	.....	7.2	......	Lav	35x5*	35x5*	.....	Fir	2950	133
Republic 10	1395	Cont N 3¾	3¾x5	22.5	L	T	Own	C	FS	Strm	G	.....	Full	DD	Bos	.....	Full	U	3	Spic	Math	I	Torb	D	6.28	18.21	Jac	34x3	34x4	Nor	Fir	2956	124
Republic 10-E	1695	Cont N-3¾	3¾x5	22.5	L	T	Own	C	FS	Strm	G	.....	Full	DD	Bos	.....	Full	U	3	Spic	Math	I	Torb	D	6.28	25.12	Jac	34x5*	34x5*	Nor	Fir	3225	124
Ruggles 20	1195	Cont N	3¾x5	22.5	L	T	Per	C	FS	Strm	V	.....	B-Li	DD	Rm	Rm	B-Li	U	3	Spic	Det	B	Col	¾Fl	5.12	20.48	Jac	34x5*	34x5*	Nor	Fir	2800	124
Sanford W-15	.....	Cont N	3¾x5	22.5	L	C	R-T	Cel	S	Zen	V	.....	B-Li	DP	.....	Dy	B-Li	U	3	Spic	.....	U	Shel	½Fl	6.5	26.67	Ros	36x6	36x6	.....	Fir	3800	137
Schwartz A	1685	Lyc KB	3½x5	19.6	L	T	G&O	H	S	Car	V	.....	Full	DP	Wes	Wes	Full	U	3	M-E	Row	B	Eat	½Fl	6.14	24.6	Ros	34x4½*	34x4½*	Sch	Fir	2850	130
Signal NF	1950	Cont J4	3¾x5	22.5	L	C	McC	Fin	FS	Strm	G	Pier	B-Li	DP	Eis	.....	B-Li	A	3	UM	Det	W	Timk	½Fl	7.2	......	Ros	34x5*	36x6*	StM	.....	3580	132
Southern 10	2090	Buda WU	3¾x5⅛	22.5	L	T	R-T	PT	S	Zen	V	Pier	Full	DD	Bos	.....	Full	U	3	.....	Shel	W	Shel	.....	.....	......	Ros	35x5	35x5	.....	.....	.....	130
*Stoughton A	1790	Wau Bux	3¾x5¼	22.5	L	C	Own	Fin	FS	Strm	G	Wau	B-Li	DD	Eis	.....	B-Li	U	3	Ther	Own	W	Shel	½Fl	6	24	Lav	34x5*	34x5*	Roy	Gdy	3300	130
Superior D	1650	Cont N-¾	3¾x5	22.5	L	T	Idl	C	FS	Strm	V	Pier	Full	DD	Eis	.....	Full	U	3	Arv	Tut	I	Torb	D	7.1	20.7	CAS	35x5*	35x5*	Sch	Fir	2950	124
Transport 15	1295	Cont N	3¾x5	22.5	L	T	.....	.....	FS	Strm	V	.....	Full	DP	Rm	.....	Full	...	3	Sned	Det	B	......	F	5.1	20.4	Lav	32x4½	32x4½	.....	Fir	2950	128
*Triangle AA	1285	H-Sp	3¼x5	16.9	L	T	Per	ZZT	FS	Strm	G	.....	Full	DD	NE	NE	Full	U	3	UP	Det	I	Clark	D	6.75	20.	Gem	34x4½	34x4½	Hay	Fir	2600	123
Ursus T 30	2050	Buda MU	3⅝x5⅛	21.	L	T	.....	PT	FS	Strm	V	.....	B-Li	DP	Wes	W	B-Li	...	3	Ther	.....	W	Timk	Flot	.....	......	Ros	34x5*	34x5*	Roy	Fir	.....	132
Vim 31	1975	Her-CU-2	3¾x5⅛	22.5	L	P	McC	Fin	F	Zen	G	.....	B-Li	D	Spl	W	B-Li	U	3	Spic	Shel	W	Shel	.....	6.5	......	Gem	35x5*	35x5*	Hoo	Fir	3790	125
White Hickory E	.....	Cont N-¾	3¾x5	22.5	L	C	Chic	Fin	FS	Strm	V	Sim	Full	DD	Eis	.....	Full	U	4	M-E	Shel	W	Timk	½Fl	7.2	21.6	Lav	34x5*	34x5*	Bim	Fir	3165	124
Wichita K	1895	Wau-BX	3¾x5¼	22.5	L	G	.....	PT	F	Strm	G	Wau	Own	C	Wag	.....	B-Li	A	4	Own	Det	W	Shel	½Fl	7.8	40.56	Ros	36x3	36x4	Bim	.....	3650	144
Wilcox AA	.....	Buda	3¾x5½	22.5	L	D	.....	PT	S	Strm	V	Dup	B-Li	DD	Bos	.....	B-Li	U	3	Spic	Shel	W	Shel	½Fl	7.7	25.8	Gem	35x5*	35x5	.....	.....	3600	130
Winther Delivery Special	1795	H-Sp 7000	3½x5	19.6	L	T	Brm	PT	F	Strm	V	.....	W-Gr	DD	Wes	W	W-Gr	U	3	Pet	Det	I	Torb	D	6.6	21.4	Lav	34x4½*	35x5*	Mut	Fir	2700	135
Wisconsin A (Sauk City)	1750	Cont	3¾x5	22.5	L	C	Chic	PT	F	Strm	V	Phar	B-Li	DD	Bos	Bos	B-Li	U	3	Spic	Det	W	Timk	½Fl	6¾	......	Lav	34x5*	34x5*	Bim	Gdy	3400	132
*Wolverine J-1	1810	Cont J-4	3¾x5	22.5	L	G	Lng	Fin	F	Strm	G	Phar	Full	DD	Spl	AL	Full	U	3	UP	Am	I	Russ	D	8.2	32.8	Gem	34x3½	34x4	Hay	Gdy	3300	140

1¼ Ton

*Clydesdale 18	1890	Cont N-3¾	3¾x5	22.5	L	T	Own	PT	FS	Zen	V	Own	B-Li	DD	Eis	Bj	B-Li	U	3	Spic	Stan	W	Timk	½Fl	6.75	22.5	Ros	34x5*	34x5*	.....	Fir	3200	136
Commerce T	1450	Cont N	3¾x5	22.5	L	T	Lng	Fin	S	Zen	V	.....	DG	C	Eis	Bj	Det	U	3	Spic	Det	B	Sals	¾Fl	5.71	18.2	Jac	34x4½	34x4½	Bim	Fir	2900	127
Dependable A	1750	Buda MU	3⅝x5⅛	21.	L	C	Lng	Fin	F	Zen	V	Mon	B.B.	DD	Spl	AL	Det	U	3	Acm	Per	W	Timk	½Fl	6.25	20.55	Ro	35x5*	36x6*	Bim	Fir	4000	134
*Diamond T-O-3	1975	Hin	3¾x5¼	22.5	L	C	GO	Fin	F	Strm	V	.....	Covt	DD	Bos	.....	Covt	U	3	Spic	Math	W	Own	½Fl	6.20	26.06	Gem	36x3½	36x4	.....	.....	3800	132
Eagle 101	1875	Buda MU	3⅝x5⅛	22	L	C	Own	C	F	Zen	G	Opt	Covt	DD	Eis	Bos	Covt	U	3	M-E	Cham	I	Torb	D	6.6	24	Ros	34x5	34x5	Stn	Fir	.....	130
Menominee HT	2000	Wis CAU	3¾x5	22.5	L	C	Own	Fin	FS	Strm	G	Mon	Det	DP	Eis	Opt	Cott	U	3	Spic	Tut	W	Wis	½Fl	7.75	28.52	Ros	34x3½	36x5	Stn	Fir	3525	130
Noble A-21	1840	Buda MU	3⅝x5⅛	21	L	C	Lng	Fin	F	Strm	V	.....	Full	DP	Eis	W	Full	U	3	Bld	.....	W	Shel	½Fl	6.50	26	Lav	34x5	34x5	.....	Fir	3700	130
*Reo F	1185	Own	4⅛x4½	27.2	L	C	Own	PT	S	John	G	.....	Own	DD	NE	NE	Own	A	3	Own	Pen	B	Own	Flot	4.7	17.3	Own	34x4½*	34x4½*	Pru	Fir	2560	128
Samson 25	995	Own	3 11/16x5¼	21.8	H	C	Own	Pt	FS	Zen	G	Mon	Own	D	Rm	AL	Own	A	3	Own	Own	S	Own	½Fl	6.83	24.12	Own	35x5*	35x5*	Own	Hay	2635	118
Service 15	.....	Mid 408	3⅝x5	21	H	C	Lng	Fin	F	Sheb	G	.....	B-Li	DP	Rm	RE	B-Li	U	3	M-E	Shel	B	Eat	½Fl	5.625	22.1	Own	34x4½*	35x5*	Det	.....	3100	132
Stewart 15	1445	Buda MU	3⅝x5⅛	21	L	C	Bus	PT	F	Zen	G	.....	Full	DP	Eis	Dy	Full	U	3	Spic	Det	I	Clark	D	6.7	26.8	Ros	35x5*	35x5*	Way	Fir	3200	130
Thomart Speed	1795	Hin	4 x5¼	25.6	L	C	Fed	H	F	Strm	G	.....	War	DP	Wes	W	W-Gr	U	3	.....	Stan	S	Eat	½Fl	5.125	......	Ros	34x5*	34x5*	Bim	Fir	3600	134
U.S.U	.....	Own	3⅝x5⅛	21.2	L	C	Lng	Fin	F	Strm	V	.....	Full	DD	Bos	Bos	Full	U	3	Bld	Shel	B	Clark	½Fl	6.25	25	Lav	34x5	34x5	Sch	Fir	3400	138
Yellow Cab M42 1¼	1640	Cont 4-V	3¾x5	22.5	L	T	Lng	Fin	FS	Zen	G	.....	B-Li	DD	Bos	.....	B-Li	U	3	Spic	Math	W	Timk	½Fl	7.2	24	Gem	35x5*	35x5*	Stn	Fir	2850	130

1½ Ton

Acason RB	.....	Wau BUX	3¾x5¼	22.5	L	P	Can	C	S	Sheb	V	Wau	Full	.....	Eis	.....	Full	U	4	Bld	Det	W	Timk	½Fl	7.75	37.2	Ros	36x3½	36x6	Bim	Opt	3850	142
Ace 1½	.....	Buda WU	3¾x5⅛	22.5	L	T	Mod	ZZT	S	Zen	V	.....	Full	DP	Eis	W	Full	A	3	UM	Math	W	Timk	½Fl	7.75	30.1	Ros	34x3½	34x5	Sch	Fir	4750	144
Acme 30	.....	Cont N	3¾x5	22.5	L	T	GO	C	FS	Rayf	V	Dup	B.B.	DP	Eis	GD	Cott	U	3	Bld	Det	W	Timk	½F	7.2	......	Ros	34x3½	34x5	Bim	.....	3400	129
Apex D	1915	Buda WU	3¾x5⅛	22.5	L	T	GO	C	F	Strm	V	.....	Full	D	AuL	Op	Full	U	3	Bld	Det	I	Torb	D	8.1	24.1	Lav	34x3½	34x4	Roy	Fir	3070	130
Armleder 21B	2425	Buda CTU	3¾x5¼	22.5	L	P	Lng	Fin	F	Zen	V	.....	Full	DD	Bos	W	Full	U	3	Spic	Math	W	Timk	Flot	7.75	29	Ros	34x3½	34x6	StM	.....	4400	Op
Armleder 40B	2850	Buda HTU	4¼x5½	28.9	L	P	Lng	Fin	F	Zen	G	Phar	B-Li	DD	Bos	W	B-Li	U	4	Spic	Math	W	Timk	Flot	7.75	......	Ros	34x3½	34x6	StM	.....	4500	...
Armleder 40C	2850	Cont C-4	4⅛x5¼	27.2	L	P	Lng	Fin	S	Zen	G	.....	B-Li	DD	Bos	.....	B-Li	U	3	Spic	Math	W	Timk	Flot	7.75	29	Ros	34x3½	34x6	StM	.....	4500	Op
Atco B	.....	Buda CTU	3¾x5¼	22.5	L	C	Chic	PT	F	Strm	G	.....	Full	D	Eis	W	Full	U	3	Hart	GC	W	Wis	.....	7.25	29	Ros	34x5*	36x6*	Smi	Fir	3900	132
Atco B 1	.....	Buda CTU	3¾x5¼	22.5	L	C	Chic	PT	F	Strm	G	.....	Full	D	Eis	W	Full	U	3	Hart	GC	I	Torb	D	7	28	Ros	34x5*	36x6*	Std	Fir	4200	132
Atterbury 20R	2475	Cont J4	3¾x5	22.5	L	C	Own	Fin	F	Zen	V	Sim	Full	DD	Ber	.....	Full	U	3	Spic	SP	W	Timk	¾Fl	7.75	31	Ros	34x3½	34x5	Arc	Fir	4500	144
Autocar F	1950	Own 2	4¾x4½	18	L	C	Own	Fin	S	Strm	G	.....	Own	DP	.....	.....	Own	A	3	.....	.....	R	Own	Flot	8.3	33.2	Own	34x4	34x6	Hoo	.....	3600	97
Autocar G	2050	Own 2	4¾x4½	18	L	C	Own	Fin	S	Strm	G	.....	Own	DP	.....	.....	Own	A	3	.....	.....	R	Own	Flot	8.3	33.2	Own	34x4	34x6	Hoo	.....	3700	120
Available H1½	2450	Her CU3	4 x5⅛	25.6	L	C	Chic	Fin	F	Strm	V	McC	B-Li	DD	Bos	.....	B-Li	U	3	M-E	Tut	W	Timk	½Fl	7	28	Ros	36x3½	36x5	Sch	.....	4000	145
Bell E	2100	Buda	3¾x5¼	22.5	L	C	Chic	PT	F	Strm	V	Dup	B.B.	DP	Eis	.....	Det	U	3	UP	Det	I	Russ	D	8.8	25.7	Gem	35x5*	36x6*	Bim	Fir	3500	136
Bessemer H2	.....	Cont-N¾	3¾x5	22.5	L	T	Sta	C	FS	Strm	G	.....	B.B.	DP	Bos	Bj	B-Li	A	3	Arv	Per	R	LM	½Fl	.....	......	Ros	36x3½	36x5	Sch	Fir	3800	144
Bridgeport A 1½	2350	Buda WU	3¾x5⅛	22.5	L	C	Own	Fin	FS	Strm	G	Pier	B.B.	D	Eis	.....	B-Li	U	3	Hart	Per	W	Timk	½Fl	7.25	......	Ros	34x3½	36x6	Jon	Fir	3800	144
*Brinton C	3250	Cont N-3¾	3¾x5	22.5	L	C	Bus	PT	F	Strm	G	.....	B-Li	D	Bos	.....	B-Li	U	3	Spic	Tut	W	Wis	½Fl	.....	33.6	Ros	34x4	34x5	Sch	.....	3900	138
*Brockway S-7	.....	Wis SU	4 x5	25.6	H	C	Bus	Fir	F	Strm	V	Phar	B-Li	DD	Eis	.....	B-Li	U	3	Spic	Mer	W	Timk	½Fl	7.75	31.2	Gem	36x4	36x6	Hoo	.....	4000	140
Buffalo Model 9	2750	Her CU-3	4 x5⅛	25.6	L	C	Own	T	F	Zen	V	Sim	Covt	D	Bos	Bos	Covt	...	..	Spic	Shel	W	Shel	½Fl	7.75	......	Ros	Opt	Opt	Wan	Gdy	5400	140
Chicago C1½	.....	Her-CU2	4 x5⅛	25.6	L	C	Brm	PT	F	Strm	G	Sim	B-Li	D	Bos	.....	B-Li	U	3	Pet	Math	W	Timk	½Fl	7	25.8	Ros	36x3½	36x5	Opt	Stn	4500	144
Climber A-20	2050	H-Sp 7000	3½x5	19.6	L	T	Chic	ZZT	FS	Strm	V	.....	Hart	DP	AtK	W	Mun	U	3	Hart	Lah	I	Torb	D	8	36.1	Ros	36x6*	38x7*	Roy	Fir	4150	146
*Clydesdale 20	2385	Cont	3¾x5	22.5	L	T	Own	PT	FS	Zen	V	Own	B-Li	DD	Eis	Bj	B-Li	U	4	Spic	Stan	W	Timk	½Fl	7.2	24	Ros	34x5*	34x5*	.....	Fir	3500	136
Collier 19	.....	Cont N¾	3¾x5	22.5	T	P	Lng	PT	S	Zen	V	Mon	Full	DP	Eis	.....	Full	U	3	UP	Math	W	Timk	½Fl	7.75	31	Own	36x4	36x6	Bim	Fir	4000	144
Commerce 12	1800	Cont N	3¾x5	22.5	L	T	Lng	Fin	S	Zen	V	.....	B-Li	DP	Eis	Bj	B-Li	U	4	Spic	Det	I	Torb	D	6.2	26.3	Jac	35x5	35x5	Bim	Fir	3100	130
Concord A	3150	Buda ITU	4 x5½	25.6	L	C	Bus	PT	F	Zen	G	Mon	B-Li	DP	Eis	.....	B-Li	U	4	Spic	Per	W	Timk	½Fl	8.75	35	Ros	36x3½	36x5	Arc	Fir	5200	140
Corbitt D-22	2200	Cont N-¾	3¾x5	22.5	L	T	McC	Fin	FS	Strm	V	Sim	B-Li	DD	Eis	.....	B-Li	U	3	Hart	Shel	W	Shel	½Fl	6.5	21.3	Ros	34x3½	34x5	Bim	Fir	4000	140
Cyclone A	2300	H-Sp 7000	3½x5	19.6	L	T	Lng	PT	FS	Sheb	G	.....	W-Gr	D	Wes	W	W-Gr	U	3	Nor	Row	I	Torb	D	8.23	26.66	Ros	34x5*	36x6*	Day	Opt	3000	136
Dart S	.....	Buda WU	3¾x5⅛	22.5	L	T	Own	C	S	Zen	V	Pier	Full	DD	Eis	.....	Full	U	3	Spic	Per	W	Own	.....	7.5	22.5	Ros	34x3½	34x6	Pru	.....	3800	140
Day Elder B	2000	Cont N	3¾x5	22.5	L	T	Bus	Fin	FS	Zen	G	.....	Covt	DD	Eis	.....	Covt	U	3	Hart	IC	W	Shel	½Fl	8.75	32.03	Gem	34x3½	34x5	Jon	Fir	3300	144
Dearborn F	2180	Buda WU	3¾x5⅛	22.5	L	T	Chic	Fin	FS	Strm	V	.....	Full	DP	Bos	.....	Full	U	3	Arv	Tut	W	Wis	½Fl	8.5	25.5	Dit	34x4	34x5	.....	.....	3280	126
Dearborn FX	2300	Buda WU	3¾x5⅛	22.5	L	T	Chic	Fin	FS	Strm	V	.....	Full	DP	Bos	.....	Full	U	3	Hart	Tut	W	Wis	½Fl	8.5	25.5	Dit	34x4	34x5	.....	.....	3600	138
Defiance D	2095	Hig	3¾x5	22.5	L	P	Per	C	FS	Strm	V	.....	B.B.	DP	Eis	AL	G-Le	U	3	Arv	Det	I	Torb	D	9.1	21	Own	35x5*	36x6*	StM	Fir	3200	140
Denby 33	2145	ContN¾	3¾x5	22.5	L	T	Lng	PT	FS	Strm	G	.....	Full	DD	Eis	RE	Full	U	3	Up	Det	I	Clark	D	7.1	27.32	Ros	35x5*	38x7*	Mot	Fir	3740	136
*Diamond T-Farm Spec	2525	Hin	3¾x5¼	22.5	L	C	GO	Fin	F	Strm	V	Own	Covt	DD	Bos	.....	Covt	U	3	Spic	Math	W	Own	½Fl	8.2	29.9	Gem	36x3½	36x5	.....	.....	5100	144
Diamond T—T	2250	Hin	3¾x5¼	22.5	L	C	GO	Fin	F	Strm	V	Own	Covt	DD	Bos	.....	Covt	U	3	Spic	Math	W	Timk	½Fl	8.2	29.9	Gem	36x3½	36x5	.....	.....	4000	144

Trade Name and Model	Chassis Price	ENGINE DETAILS: Make and Model Number 4 Cylinder unless otherwise noted (1)	Bore and Stroke	N. A. C. C. Horsepower	Valve Arrange't (2)	How Cooled (3)	Radiator (Make) (4)	Radiator (Type) (5)	Lubrication (6)	Carburetor (7)	Fuel Feed (8)	Governor (Make) (9)	Clutch (Make) (10)	Clutch (Type) (11)	Ignition System (12)	Engine Starter (13)	GEARSET: Make (14)	Location (15)	Speeds	Universal (Make) (16)	Springs (Make) (17)	REAR AXLE: Final Drive (18)	Make (19)	Type (20)	Total Gear Reduction in High	Total Gear Reduction in Low	Steering Gear (Make) (21)	TIRES, WHEELS, RIMS: *Pneumatic †Dual Front	Rear	Wheels (Make) (22)	Rim Equipment (23)	Chassis Weight (Stripped)	Wheelbase
1½ Ton—Con'd																																	
Diehl B	....	H-Sp 7000	3½x5	19.6	L	T	....	H	FS	Zen	G	....	M-E	....	Bos	....	Durs	....	3	M-E	Row	I	Torb	D	5.3	....	Ros	....	....	Wan	....	2500	120
D-Olt A	2450	H-Sp 7000	3½x5	19.6	L	T	GO	PT	S	Zen	V	Dup	B.B.	....	Bos	....	Cott	....	4	Spic	SP	W	Timk	½Fl	8.25	....	Ros	34x4	34x5	....	....	4500	168
Douglas G-1½	1750	Buda WU	3¾x5¼	22.5	L	S	Own	PT	P	Sheb	V	....	Full	DP	Eis	....	Full	U	3	Arv	Own	I	Torb	D	8	23.1	Ros	24x3½	34x5	Own	Fir	3725	126
Douglas GW	1750	Wei	3¾x5¼	22.5	H	C	Own	PT	F	Sheb	V	....	B.B.	DP	Eis	....	G-Le	U	3	Arv	Own	I	Torb	D	8	23.1	Ros	24x3½	34x5	Own	Fir	3725	126
Erie E-1½	....	Buda CTU	3¾x5¼	22.5	L	C	Fed	C	FS	Zen	V	....	Full	D	Bos	Bos	Full	A	3	Arv	Per	W	Shel	½Fl	7.8	31.2	Ros	36x6*	36x6*	Bim	Fir	4400	144
*Federal TE	2175	Cont C4	4⅛x5¼	27.2	L	C	Own	PT	FS	Zen	G	Phar	B.B.	DP	Eis	....	Det	A	4	Spic	Mat	W	Timk	Flot	8.5	37.4	Gem	36x3½	36x5	Sch	Fir	4250	144
Forschler C	....	Cont N	3½x5	19.6	L	C	Own	....	FS	Zen	V	Dup	Full	....	Bos	Op	Full	....	3	Hart	Own	W	Shel	....	....	....	Ros	36x3½	36x5	Smi	....	3670	120
Front Drive C	2800	Buda CTU	3¾x5¼	22.5	L	G	EM	PT	S	Zen	G	Pier	B.B.	DD	Spl	Op	Own	A	3	Own	Own	W	Own	½Fl	8	32	Lav	34x5	34x5	Stn	....	3200	Op
Garford 25 B	1990	Buda WU	3¾x5¼	22.5	L	C	Own	Fin	S	Strm	V	....	....	DD	Spl	....	Own	A	3	Spic	Per	W	Timk	½Fl	7.75	....	Ros	36x3½	36x4	....	....	4000	135
Gersix M	3100	Buda ITU	4 x5½	25.6	L	C	Idl	C	F	Strm	V	Mon	B.B.	....	Bos	....	Cott	U	3	Bld	Tut	W	Shel	....	7.7	31	Ros	36x3½	36x6	Jon	....	4620	142
Giant 15A	2250	Cont N	3¾x5	22.5	L	T	Idl	....	FS	Sheb	G	....	B-Li	DD	Eis	....	B-Li	U	3	Spic	Math	W	Timk	½Fl	7.8	24.97	Jac	34x3½	34x5	Way	....	3450	138
Graham Brothers	1325	Dodge	3⅞x4½	24	L	C	McC	PT	FS	Stew	V	....	Dod	DD	NE	NE	Dod	U	3	Var	Det	S	Own	½Fl	6.28	29.29	Dod	33x4½*	36x6	....	....	2540	140
Gramm-Pioneer 15	1900	Cont N	3¾x5	22.5	L	T	Own	Fin	S	Strm	G	....	Full	DD	NE	NE	Full	U	3	Own	Per	I	Clark	D	7.6	30.4	Ros	36x3½	36x5	Bim	Fir	3660	138
Gramm-Pioneer 65	2500	Cont N	3¾x5	22.5	L	T	Own	Fin	S	Strm	G	....	Full	DD	NE	NE	Own	A	3	Own	Per	W	Eat	½Fl	7.8	28	Ros	36x3½	36x5	Bim	Fir	3860	138
G. W. W. Farm Spec.	1085	Wei	3¾x5½	22.5	H	P	Chic	....	F	Sheb	G	....	Full	....	Del	Del	Full	U	3	Acm	GC	I	Clark	D	7	....	Woh	35x5	35x5	Roy	Fir	3200	142
Higrade B20	2500	Cont K4	4⅛x5¼	27.2	L	G	Per	PT	FS	Zen	V	....	Full	DP	Eis	AL	Full	U	3	Bld	Per	W	Shel	....	7.7	31	Lav	36x6	36x6	Det	Fir	3100	130
H R.L.-R.	3250	Hink HAA	4 x5¼	25.6	L	C	Fed	Fin	F	Zen	V	Hin	B-Li	DP	Bos	GD	B-Li	U	4	Spic	Shel	W	Shel	....	7.75	30	Ros	36x4	36x7	Sch	Gdy	4560	144
*Hug	1350	Buda MU	3⅝x5⅛	22½	L	C	Per	....	F	Zen	G	....	W-Gr	DP	Spl	....	W-Gr	U	4	Bld	Tut	B	Clark	½Fl	5.5	4.84	Ros	34x5	34x5	Stn	Fir	2900	118
Hurlburt		Buda IU	4 x5½	25.6	L	C	Own	C	FS	Flch	G	Dup	B-Li	D	Eis	....	B-Li	U	3	Spic	Per	W	Own	....	....	....	Ros	34x4	34x5	Way	....	4000	148
Huron-Erie	2290	Buda CTU	3¾x5¼	22.5	L	C	....	Fin	F	Zen	V	Pier	B.B.	D	Bos	....	Cott	U	4	Det	Det	I	Clark	D	7	36.4	Jac	35x5*	38x7*	AuW	Fir	....	144
*Independent G (Iowa)	2040	Cont J	3¾x5	22.5	L	C	GC	PT	FS	Strm	V	....	Full	DD	Bos	....	Full	U	3	Bld	GC	I	Russ	D	8.2	....	Lav	34x3½	34x5	StM	Fir	3875	142
Indiana 12	....	Wau BUX	3¾x5¼	22.5	L	C	McC	Fin	F	Strm	G	Wau	B.B.	DP	Eis	....	B-Li	A	3	Spic	Shel	W	Shel	½Fl	7.8	31.2	Woh	34x3½	34x5	Bim	....	4100	134
*International 31	1650	Own	3½x5¼	19.6	L	C	Own	Fin	FS	Ens	G	Own	Own	DP	Bos	Own	Own	A	3	Own	....	I	Own	D	8	26.5	Own	....	....	Own	....	3190	128
Kalamazoo GI	1800	Cont N	3¾x5	22.5	L	T	GO	C	FS	Strm	V	Pier	Full	D	Eis	Dy	Full	A	4	B.B.	Shel	W	Wis	½Fl	8.5	40.8	Ros	34x4	34x5	Bim	....	4450	144
*Kalamazoo LG	2645	Wis SU	4 x5	25.6	H	P	GO	PT	F	Strm	V	Pier	Full	D	Bos	Dy	Ful	A	4	B.B.	Shel	W	Shel	½Fl	8.6	40.8	Ros	36x4	36x7	Smi	....	5080	144
Kelly-Springfield K31	2700	Own	3¾x5¼	22.5	L	C	Lng	Fin	F	Zen	G	Pier	Own	C	Eis	W	Covt	A	3	Own	Per	C	Own	D	8.6	31.58	Gem	36x3½	36x6	StM	....	4420	Op
Kelly-Springfield K34	2700	Own	3¾x5¼	22.5	L	C	Lng	Fin	F	Zen	G	Pier	B.B.	D	Eis	W	Covt	A	3	Spic	Per	W	Own	½Fl	8.6	31.58	Gem	36x3½	36x6	StM	....	4670	Op
Kissel General Utility	1975	Own 40000	3⅞x5½	24.1	L	C	McC	PT	S	Strm	V	Pier	W-Gr	DP	Eis	....	W-Gr	U	3	Spic	Mat	W	Shel	½Fl	7.8	28.5	Jac	36x3½	36x5	Pru	....	4100	152
Kleiber A	....	Cont K4	4⅛x5¼	27.2	L	C	Per	C	FS	Strm	G	Sim	....	DD	Bos	....	B-Li	A	4	Spic	....	W	Timk	½Fl	7.1	37.51	Ros	36x3½	36x6	Smi	....	5200	143
*Koehler D	2150	H-Sp	3½x5	19.6	L	T	Own	PT	F	Zen	G	Sim	B-Li	D	Spl	....	....	U	3	....	Math	W	Dun	½Fl	7.25	....	Lav	34x3½	34x5	Way	....	3600	137
Larrabee U	2400	Cont N¾	3¾x5	22.5	L	C	Bus	Fin	S	Sheb	G	Sim	B-Li	DD	Bos	....	B-Li	U	3	....	Mer	W	Shel	½Fl	7.6	25.5	Ros	34x3½	34x5	Hoo	....	3600	138
Luedinghaus W	2490	Wau BUX	3¾x5¼	22.5	L	G	Own	Pit	FS	Sheb	G	Wau	B.B.	D	Spl	....	Det	U	3	Spic	Tut	W	Wis	½Fl	8.6	26.6	Lav	34x3½	34x5	StM	....	4100	144
*Maccar L	....	Cont C4	4⅛x5¼	27.2	L	C	Own	Fin	FS	Strm	G	Mue	B-Li	DD	Eis	Bos	B-Li	U	4	Spic	Mer	W	Timk	½Fl	8.75	46.81	Ros	36x4	36x6	Day	Fir	4800	150
*Mack AB1½	3000	Own AB	4 x5	25.6	L	C	Own	C	S	Zen	G	Own	Own	DD	Spl	....	Own	U	4	Spic	Mer	C	Own	D	6.9	28.01	Own	36x4	36x3½†	....	....	5000	Op
*Mack AB1½	3450	Own AB	4 x5	25.6	L	C	Own	C	S	Zen	G	Own	Own	DD	Spl	....	Own	U	4	Spic	Mer	R	Own	Flot	7.6	30.40	Own	36x4	36x3½†	....	....	5100	Op
Master JW	2290	Buda OU	4⅛x5½	27.2	L	C	Chic	PT	S	Mas	V	McC	Full	DP	Eis	....	Full	U	3	Spic	Det	W	Timk	½Fl	Opt	Opt	Ros	34x3½	34x5	Pru	....	3900	142
Master JWL	2365	Buda OU	4⅛x5½	27.2	L	C	Chic	PT	S	Mas	V	McC	Full	DP	Eis	....	Full	U	3	Spic	Det	W	Timk	½Fl	Opt	Opt	Ros	34x3½	34x5	Pru	....	3900	160
Master JD	2590	Buda OU	4⅛x5½	27.2	L	C	Chic	PT	S	Mas	V	McC	Full	DP	Eis	....	Full	U	3	Spic	Det	W	Walk	Flot	Opt	Opt	Ros	34x3½	34x5	Walk	....	3900	142
Master JDL	2665	Buda OU	4⅛x5½	27.2	L	C	Chic	PT	S	Mas	V	McC	Full	DP	Eis	....	Full	U	3	Spic	Det	W	Walk	Flot	Opt	Opt	Ros	34x3½	34x5	Walk	....	3900	160
Maxwell	....	Own	3⅝x4½	21.	L	T	Own	PT	FS	Eag	G	....	Own	C	AtK	....	Own	U	3	Own	....	W	Own	½Fl	7.25	34.4	Own	35x5	35x5	Kel	Fir	2385	124
Menominee H	2475	Wis EAU	4 x5	25.6	L	C	Own	Fin	FS	Strm	G	Mon	Det	DP	Eis	Opt	Cott	U	3	Spic	Tut	W	Wis	½F	8.25	30.36	Ros	36x3½	36x5	Stn	Fir	4220	144
Moline 10	1695	Own NT	3½x5	19.6	H	T	Mod	C	F	Till	G	Phar	....	DP	Spl	....	Own	U	3	Arv	Math	I	Torb	....	8	38	Ros	34x5*	36x6*	....	Fir	....	130
Moreland EX	2800	Cont K4	4⅛x5¼	27.2	L	C	Own	C	F	Mas	P	....	Own	DD	Spl	....	Own	A	4	Ther	US	W	Timk	½Fl	7	33.88	Ros	36x3½	36x7	Smi	....	4975	126
Napoleon 11	1860	Vict T	3½x5	19.6	H	T	Own	PT	F	Scoe	G	....	Full	D	Bos	Bos	Full	U	3	Bld	Math	I	Keno	D	8	24	Lav	35x5*	36x6*	Roy	Fir	3450	133
*Nelson-LeMoon G2	....	Cont K4	4⅛x5¼	27.2	L	C	Chic	Fin	F	Strm	G	Phar	B-Li	DD	Bos	W	B-Li	U	3	Own	Tut	W	Timk	½Fl	7	....	Ros	36x3½	36x6	Pru	Gdy	3400	Op
Noble B-31	2480	Buda CTU	3¾x5¼	22.5	L	C	Chg	Fin	F	Strm	V	Pier	Full	DP	Eis	W	Full	U	4	ME	....	W	Shel	½Fl	8.66	41.5	Lav	36x4	36x7	Bim	Fir	4750	156
Norwalk	1925	Lyco K	3½x5	19.6	L	T	Stan	C	FS	Zen	V	....	B.B.	D	Del	Dy	G-Le	U	3	UM	SPar	W	Shel	¾Fl	7.75	....	CAS	34x3½	34x5	E&O	Fir	3200	143
Norwalk 35 E Special	2285	Buda CTU	3¾x5¼	22.5	L	G	Stan	C	FS	Zen	V	....	B.B.	D	Del	Dy	G-Le	U	3	Spic	Stan	W	Shel	¾Fl	7.2	....	Det	34x4*	34x5	E&O	Fir	3450	150
Ogden D1½	....	Cont N	3¾x5	22.5	L	T	Chic	Fin	FS	Strm	G	Pier	B-Li	DD	Spl	....	B-Li	U	3	M-E	Tut	W	Timk	½Fl	8.75	....	Ros	36x3½	36x5	Stn	....	3400	136
*O. K. 1½T	2000	Buda ITU	4 x5½	25.6	L	G	R-T	PT	FS	Zen	V	Pier	Full	DD	Eis	....	Full	U	3	Hart	Cham	W	Wis	½Fl	8.25	24.8	Ros	36x3½	36x5	Bim	....	4310	146
Old Reliable A	2350	WisEU	4 x5	25.6	L	C	Chic	PT	F	Strm	V	Mon	Full	DD	Bos	Op	Full	U	3	Spic	Shel	W	Shel	½Fl	7.7	24.94	Ros	34x3½	36x6	StM	....	4150	138
Paige 52-19	1950	HinHAA400	4 x5¼	25.6	L	C	Own	Fin	F	Strm	V	Hink	B-Li	DD	Bos	....	B-Li	A	4	Spic	Per	W	Timk	½Fl	7.7	37.51	Ros	34x3½	34x5	Own	Fir	4000	140
Pittsburgher A	3000	Own	3⅝x5	21.2	T	C	GO	Fin	F	Strm	V	....	B-Li	DP	Bos	....	B-Li	U	4	Spic	C	W	Own	....	8.75	46.8	Ros	36x4	36x7	Smi	....	5000	152
*Power F	3150	Hink HA400	4 x5¼	25.6	L	G	GO	PT	F	Zen	V	Hin	Full	DD	Eis	W	Full	U	4	Arv	Row	W	Vul	F	7.75	37.2	Ros	36x6*	40x8*	StM	Fir	5300	150
Premocar	2350	Lyc-K	3½x5	19.6	L	T	....	C	S	Zen	V	....	BB	....	Del	Dyn	G-L	U	3	Spic	Shel	W	Timk	½Fl	7	....	Dit	36x6	36x6	....	Fir	4200	130
*Rainier R26	2490	Cont J-4	3¾x5	22.5	L	T	EM	Fin	FS	Zen	V	Pier	B-Li	DP	Eis	....	B-Li	U	3	Spic	Per	W	Shel	....	7.8	....	Ros	34x3½	34x5	....	Fir	3600	147
Reliance 10A	2400	Buda ITU	4 x5½	25.6	L	C	Bus	PT	FS	Strm	G	Pier	Full	DD	Eis	....	Full	U	3	Pet	Shel	P	Badg	D	6.6	26.4	Ros	36x3½	36x5	Bim	Gdy	4500	150
Republic 11X	1795	Cont N3¾	3¾x5	22.5	L	T	Own	C	FS	Strm	G	....	Full	DD	Bos	....	Full	U	3	Hart	Math	I	Torb	D	8	18.84	Jac	34x4	34x6	Nor	Fir	3656	144
Rowe CW1½	3000	Wis CAU	3¾x5	22.5	L	C	Fed	H	F	Zen	G	Sim	B-Li	DD	Bos	....	B-Li	U	4	Spic	Shel	W	Shel	½Fl	6.5	26	Ros	36x6*	36x6*	Hoo	....	3800	133
Rumely A	1990	Buda CTU	3¾x5¼	22.5	L	C	Mod	ZZT	F	Strm	G	Pier	Full	DD	Ber	....	Full	U	3	Bld	Mat	W	Shel	½Fl	7.8	31.2	Gem	36x3½	36x5	Mot	Gdy	4100	144
Selden Unit 30	2250	Cont N	3¾x5	22.5	L	T	Lng	Fin	FS	Strm	G	Pier	B-Li	D	Eis	....	B-Li	U	3	Spic	Per	W	Timk	½Fl	7	23.31	Lav	34x3½	34x5	Aro	....	3560	137
*Service 21	....	Buda R U	3½x5⅛	19.6	L	T	Lng	Fin	FS	Strm	V	....	Full	DD	Eis	....	Full	U	3	Arv	Shel	W	Timk	½Fl	7.75	23.25	Ros	34x3½	34x5	Bim	....	3450	137
Signal H	2450	Cont C4	4⅛x5¼	27.2	L	C	McC	Fin	FS	Strm	G	Pier	B-Li	DD	Eis	....	B-Li	A	4	Spic	Shel	W	Timk	½Fl	7.75	31	Ros	34x4	36x6	St.M	....	4760	146
Southern 15	2590	Cont N	3¾x5	22.5	L	T	R-T	PT	S	Zen	V	Pier	Full	DD	Bos	....	Full	U	3	....	Shel	W	Shel	....	....	....	Ros	36x6	38x7	....	....	....	144
Standard 1K	1600	Cont N	3¾x5	22.5	L	C	Lng	Fin	F	Strm	V	....	B-Li	DD	Eis	....	B-Li	U	3	Spic	Per	W	Timk	½Fl	7.2	23.97	Ros	34x3½	34x5	....	Opt	3466	134
Sterling 1½	2885	Ster FU	4x5¾	25.6	L	C	Own	PT	F	Zen	V	Wau	B-Li	DD	Eis	....	B-Li	U	4	Spic	Mat	W	Timk	½Fl	7	37.45	Ros	36x3½	36x5	Pru	....	4750	142
*Stewart 9	1790	Cont N¾	3¾x5	22.5	L	T	Bus	PT	FS	Zen	G	....	Full	DP	Eis	....	Full	U	3	Hart	Det	I	Clark	D	7.6	22.8	Gem	34x3½†	34x6	Way	Fir	3440	140
*Stoughton B	2150	Wau BUX	3¾x5¼	22.5	L	C	Own	Fin	FS	Strm	G	Wau	B-Li	DD	Eis	....	B-Li	U	3	Ther	Own	W	Shel	½Fl	7.8	31.2	Lav	36x3½	36x5	Roy	Gdy	3800	140
Tiffin GW	2100	Cont C4	4⅛x5¼	27.2	L	C	Own	Fin	FS	Sheb	G	Pier	Full	DD	Bos	W	Full	U	3	Pet	Kal	W	Shel	½Fl	7.7	23.25	Ros	36x3½	36x5	Smi	....	3750	135
Tower J1½	2175	Cont C4	4⅛x5¼	27.2	L	C	Own	PT	S	Zen	G	....	Full	DP	Eis	....	Full	U	3	Bld	Det	W	Timk	½Fl	7.25	29	Ros	35x5*	38x7*	Pru	Fir	4520	142
Traffic-Speedboy	1595	Cont N4	3¾x5	22.5	L	T	Own	C	FS	Cart	G	....	Covt	DP	Bos	GD	Covt	U	3	Ther	Det	I	Russ	D	6.15	22.5	Own	35x5*	35x5*	Day	Fir	3400	128
Transport 25	1495	Buda WU	3¾x5⅛	22.5	L	T	....	....	F	Strm	V	....	Full	DP	Eis	....	Full	....	3	Sned	Det	I	Clark	....	7.25	21.7	Jac	34x3½	34x5	....	....	3700	130
Traylor B	2390	Buda WU	3¾x5⅛	22.5	L	C	GO	Fin	F	Zen	G	Sim	Covt	DD	Spl	....	Covt	U	3	M-E	Mer	W	Shel	½Fl	7.8	....	Ros	34x3½	34x6	Sch	....	4000	140
*Triangle A	1985	Wau BUX	3¾x5¼	22.5	L	C	Per	ZZT	FS	Strm	G	Wau	Full	DD	Eis	....	Full	U	3	UP	Det	I	Clark	D	7.25	21	Gem	34x3½	34x6	Roy	Fir	3750	144
Triumph	1950	Buda MU	3⅝x5⅛	21	L	C	Mod	PT	F	King	V	Pier	B.B.	D	Spl	....	Cott	U	4	UP	Tut	W	Wis	½Fl	7.25	....	Lav	36x3½	36x5	Stn	Stn	....	132
Ultimate A	3150	Buda ITU	4 x5½	25.6	L	C	Own	PT	F	Strm	G	Pier	B-Li	DD	Eis	Bos	B-Li	U	4	Spic	Shel	W	Shel	½Fl	6.5	34.7	Ros	36x3½	36x6	Jon	Fir	4500	140

United A-1½	2445	Buda CTU	3¾x5¼	22.5	L	C	Mod	PT	F	Strm	G	Sim	Full	DD	Eis	Op	Full	U	3	Bld	Shel	I	Clark	D	7.6	30.4	Jac	34x3½	34x5	Pru	Fir	4000	145
Ursus U 40	2500	Buda CTU	3¾x5¼	22.5	L	T	.....	PT	F	Strm	V	Pier	Det	D	Spl	.....	Cott	...	3	Ther	.....	W	Opt	.....	.....	.....	Ros	Opt	Opt	Roy	....	.....	Op
U. S.-N.	..	Cont N	3¾x5	22.5	L	C	Lng	Fin	FS	Strm	V	.....	Full	DD	Eis	Op	Full	U	3	Opt	Shel	I	Clark	D	7.6	25.3	Lav	36x3½	36x5	Sch	...	3800	144
U. S.-N. C.	.....	Cont N	3¾x5	22.5	L	C	Lng	Fin	FS	Strm	V	.....	Full	DD	Eis	Opt	Full	U	3	Opt	Shel	I	Clark	D	7.6	25.3	Lav	35x5*	38x7*	Sch	.....	3800	144
U. S.-N. P.	.....	Cont N	3¾x5	22.5	L	C	Lng	Fin	FS	Strm	V	.....	Full	DD	Eis	Opt	Full	U	3	Opt	Shel	W	Shel	½Fl	7.8	25.97	Lav	35x5*	38x7*	Sch	.....	3900	144
U. S.-N W	.....	Cont N	3¾x5	22.5	L	C	Lng	Fin	FS	Strm	V	.....	Full	DD	Eis	Op	Full	U	3	Opt	Shel	W	Shel	½Fl	7.8	25.97	Lav	36x3½	36x5	Sch	.....	3900	144
Velie 46	1585	Cont N¾	3¾x5	22.5	L	C	Own	PT	FS	Strm	G	Mon	B.B.	D	Ber	.....	Durs	U	3	Arv	Mat	I	Torb	D	8	37.4	Ros	36x3½	36x5	Bim	Gdy	3650	133
White Hickory H	.....	Cont N¾	3¾x5	22.5	L	C	Chic	Fin	FS	Strm	V	Sim	Full	DD	Eis	.....	Full	U	3	Arv	Shel	W	Timk	½Fl	8.5	25.5	Ros	36x3½	36x5	Bim	Fir	3750	144
Wilcox BB	.....	Own	4¼x5	28.9	L	P	.....	PT	S	Strm	G	Dup	Own	C	Bos	.....	Own	A	4	Own	Shel	R	Walk	½Fl	8.25	39.9	Own	36x4	36x5†	.....	.....	4600	135
Wilson F.	2270	Own	3¾x5⅛	22.5	L	G	Lng	PT	FS	Mar	G	Pier	B.B.	D	Eis	.....	Own	A	4	Ther	Per	W	Timk	½Fl	7.75	24	Ros	36x3½	36x5	..	.....	3800	142
Winther 39	.....	Wis CAU	3¾x5	22.5	L	P	Brm	PT	F	Strm	G	.....	Full	DD	Eis	W	Full	U	3	Pet	Det	I	Clark	D	7	21	Lav	34x3½	34x5	Own	Fir	3700	140
Winther 430	.....	Wis CAU	3¾x5	22.5	L	P	Brm	PT	F	Strm	G	.....	Full	DD	Eis	W	Full	U	3	Pet	Det	I	Clark	D	9	36	Lav	32x4	32x4	Own	Fir	4100	132
Wisconsin B (Sauk City)	2100	Cont	3¾x5	22.5	L	C	Chic	PT	F	Strm	V	Phar	B-Li	DP	Opt	Bos	B-Li	U	3	Spic	Det	W	Timk	½Fl	8	......	Lav	34x5*	36x6*	Bim	Gdy	4000	132
Wisconsin (Sauk City)	2500	Wau FU	4 x5¾	25.6	L	C	.....	PT	F	Strm	V	Wau	B-Li	DD	Bos	Bos	B-Li	U	4	Spic	.....	W	Timk	½Fl	7.20	......	Lav	34x5	36x6	.....	.....	.....	136
Witt Will N.	2250	Cont C4	3¾x5¼	22.5	H	G	Mod	Opt	FS	Zen	G	Pier	B-Li	DD	Eis	.....	B-Li	U	3	Spic	Del	W	Timk	½Fl	7	30.36	Ros	36x3½	36x4	Arc	.....	4000	120
*Wolverine J1½	2020	Cont J	3¾x5	22.5	L	G	Lng	Fin	F	Strm	G	Phar	Full	DD	Spl	AL	Full	U	3	UP	Am	I	Russ	D	8.8	35.2	Gem	34x3½	34x5	Hay	Gdy	3500	140

2 Ton

Acme 40	.....	Cont J4	3¾x5	22.5	L	C	GO	Fin	F	Zen	V	Dup	B.B.	DP	Eis	DL	Cott	U	3	Bld	Det	W	Timk	½Fl	8.75	35	Ros	34x3½	34x5	Bim	.....	3980	141
Autocar H	2950	Own 4	4 x5½	25.6	L	C	Own	Fin	S	Strm	G	.....	Own	DP	....	.....	Own	A	4	.....	.....	R	Own	Flot	.....	......	Own	34x5	36x7	Hoo	.....	5200	114
Autocar K	3075	Own 4	4 x5½	25.6	L	C	Own	Fin	S	Strm	G	.....	Own	DP	....	.....	Own	A	4	.....	.....	R	Own	Flot	.....	......	Own	34x5	36x7	Hoo	.....	5350	138
Available H 2	2750	Her CU3	4 x5⅛	25.6	L	C	Chic	Fin	FS	Strm	V	Pier	B-Li	DD	Bos	.....	B-Li	A	4	M-E	Tut	W	Timk	½Fl	7	36.4	Ros	36x3½	36x6	Sch	.....	4400	147
Case TR	.....	Own K	4¼x5¾	28.9	H	C	Mod	C	S	Bent	G	Own	T-D	.....	Eis	.....	Own	U	3	Spic	Har	I	Torb	D	8	26	Opt	36x6	38x7	.....	Fir	4700	144
Clydesdale 42	2475	Cont	3¾x5	22.5	L	T	Own	PT	FS	Zen	G	Own	B-Li	DD	Bos	.....	B-Li	U	3	Spic	Stan	W	Timk	½Fl	7	23.3	Ros	36x3½	36x6	.....	.....	3800	146
Collier 20	.....	Cont C4	4⅛x5¼	27.2	T	P	Lng	PT	FS	Zen	V	Pier	Full	DP	Eis	.....	Full	U	4	UP	Math	W	Timk	½Fl	8.5	40.8	Ros	36x4	36x7	Bim	Fir	4800	152
Commerce 16	2150	Cont N	3¾x5	22.5	L	T	Lng	Fin	S	Zen	V	.....	B-Li	DP	Eis	Bj	B-Li	U	4	Spic	Am	I	Torb	D	7	28.8	Jac	35x5	36x6	Bim	Fir	3360	137
Concord AX	3250	Buda ITU	4 x5½	25.6	L	C	Bus	PT	F	Zen	G	Mon	B-Li	DP	Eis	.....	B-Li	U	4	Spic	Per	W	Timk	½Fl	8.75	35	Ros	36x3½	36x5	Arc	Fir	5300	150
Corbitt C-22	2600	Cont C4	4⅛x5¼	27.2	L	C	McC	Fin	FS	Strm	V	Sim	B-Li	DD	Eis	.....	B-Li	U	3	Hart	Shel	W	Shel	½Fl	8.66	29.4	Ros	36x3½	36x7	Bim	Fir	5265	148
Day Elder D	2400	Cont C2	4⅛x5¼	27.2	L	C	Bus	Fin	FS	Zen	G	Mon	Covt	DD	Eis	.....	Covt	U	4	Hart	IC	W	Shel	½Fl	8.66	41.17	Gem	36x4	36x7	Jon	Fir	3950	144
Dearborn 48	2590	Buda WU	3¾x5⅛	22.5	L	T	Chic	Fin	FS	Strm	V	.....	Full	DP	Bos	.....	Full	U	3	Hart	.....	W	Wis	½Fl	9.6	28.8	Dit	34x4½*	34x7	.....	.....	3750	148
*Defiance E	2275	Hig	3¾x5	22.5	L	P	Per	C	FS	Strm	V	.....	B.B.	DP	Eis	AL	G-Le	U	3	Arv	Det	I	Torb	D	9.1	24	Own	35x5*	38x7*	StM	Fir	3500	140
Denby 34	2395	Cont N¾	3¾x5	22.5	L	T	Lng	PT	FS	Strm	G	Mon	Full	DD	Eis	.....	Full	U	4	Up	Det	I	Russ	D	8.85	42.5	Ros	36x3½	36x6	Hay	Fir	3950	144
Dependable C	2350	Buda CTU	3¾x5¼	22.5	L	C	Lng	Fin	F	Zen	V	Mon	Full	DD	Spl	AL	Full	U	3	Acm	Per	W	Wis	½Fl	8.2	31.5	Ros	34x3½	34x5	Bim	Fir	4120	Op
Dorris K4	3400	Own	4¼x5½	28.9	H	C	McC	Fin	F	Strm	G	Own	Own	DP	Bos	.....	W-Gr	A	4	Spic	Row	W	Timk	Flot	7.75	38.67	Ros	36x4	36x7	Smi	Fir	5150	162
Douglas H	2250	Buda HTU	4¼x5½	28.9	L	C	Own	PT	F	Sheb	V	Pier	Full	DP	Eis	.....	Full	U	3	Arv	Own	I	Torb	D	8.50	28.1	Ros	34x4	36x7	Own	Fir	3900	128
Douglas HW-2	2350	Buda HTU	4¼x5½	28.9	L	C	Own	PT	F	Sheb	V	Pier	Full	DP	Eis	.....	Full	U	3	Arv	Own	W	Wis	.....	8.75	29.1	.....	34x4	36x7	Own	Fir	3950	132
Drake T-60	2495	H-Sp-11000	3¼x5	25.3	L	C	.....	C	FS	Zen	V	Mon	B.B.	.....	Ber	Bj	G-Le	U	3	UM	GC	W	Wis	½Fl	Op	......	Woh	35x5*	36x6*	Day	Fir	3600	140
Duplex A	2775	Hink HAA	4 x5¼	25.6	L	P	Mod	PT	F	Strm	G	.....	Covt	DD	Wes	W	Covt	U	3	Pet	Penn	W	Shel	½Fl	6.5	26.1	Ros	35x5*	38x7*	Pru	.....	4400	145
Eagle 100	2275	Buda CTU	3¾x5¼	22.5	L	P	Own	C	F	Zen	G	.....	Covt	DD	Eis		Covt	U	3	M-E	Cham	I	Russ	D	8.8	31.8	Lav	34x4	34x7	Stn	Fir	4100	130
Fageol 1½-2	3000	Wau-BUX	3¾x5¼	22.5	L	C	Mod	C	F	Zen	V	Wau	Det	DD	Spl	.....	Own	U	5	UP	Math	W	Fink	½Fl	5.6	59.5	Ros	34x3½	34x6	Pru	.....	4300	136
Fargo S	1600	Cont N	3¾x5	22.5	L	T	Own	Fin	S	Rayf	G	.....	Full	DP	Bos	.....	Full	U	4	Spic	Shel	I	Russ	D	9.5	......	Jac	36x4	36x6	.....	.....	3900	144
*Federal UE	2425	Cont C4	4⅛x5¼	27.2	L	C	Own	PT	FS	Zen	G	Phar	B.B.	DP	Eis	.....	Det	A	4	Spic	Math	W	Timk	Flot	9.25	40.7	Gem	36x4	36x7	Sch	Fir	4800	156
Forschler D	.....	Cont C4	4⅛x5¼	27.2	L	C	E-M	PT	FS	Zen	...	Dup	Full	.....	Bos	Op	Full	...	3	Hart	Own	W	Shel	.....	.....	......	Ros	34x4	36x7	Smi	.....	4735	144
Fulton C	1985	HSp7000	3½x5	19.6	L	T	GO	H	FS	Cart	G	.....	Covt	DP	Ber	.....	Covt	...	3	UP	.....	I	Russ	D	10.2	......	Lav	34x4	34x6	Hoo	.....	3300	137
Gary I	2250	Buda IU	4 x5½	25.6	L	C	Chic	Fin	F	Mas	G	McC	Full	DD	Eis	.....	Full	U	3	Bld	Math	W	Timk	Flot	7.25	21.75	Ros	36x3½	36x6	Pru	Gdy	3800	144
G.M.C. K-20	2550	Own	4 x5½	25.6	L	B	Own	Fin	F	Mar	G	Own	Own	DD	Eis	Own	Own	U	3	Own	Det	W	Timk	¾Fl	6	21.9	Own	36x6	36x6	.....	.....	3815	178
G. M. C. K-41A	2375	Own	4 x5½	25.6	L	B	Own	Fin	F	Mar	G	Own	Own	DD	Eis	Opt	Own	U	7	Own	Det	W	Timk	Flot	7.25	49.1	Own	36x4	36x7	Own	.....	5030	146
G.M.C. K-41B	2375	Own	4 x5½	25.6	L	B	Own	Fin	F	Mar	G	Own	Own	DD	Eis	Opt	Own	U	7	Own	Det	W	Timk	Flot	7.25	49.1	Own	36x4	36x7	Own	.....	5080	158
Gramm-Pioneer 20	2925	Cont C2	4⅛x5¼	27.2	L	C	Own	Fin	S	Strm	G	Pier	Full	DD	NE	NE	Own	A	4	Own	Per	W	Shel	½Fl	7.7	36.7	Ros	36x4	36x7	Bim	Fir	4910	144
Hal-Fur D	2000	Hin HA-400	4 x5½	25.6	L	C	GO	PT	F	Strm	V	Hin	B.B	P	Bos	W	B-Li	A	4	Pet	Per	W	Timk	½Fl	5.5	24	Gem	35x5*	36x6	Stu	Fir	3400	Op
Harvey WOA	2650	Buda ETU	4¼x5½	28.9	L	C	Own	Fin	F	Strm	G	McC	Full	DD	Bos	.....	Full	U	3	Spic	Shel	W	Shel	½Fl	7.75	23.2	Ros	34x4	34x7	StM	.....	5300	160
Indiana 20	.....	Own 38	4⅛x5½	27.2	L	C	McC	Fin	F	Strm	G	Pier	B.B.	DP	Eis	.....	B-Li	A	4	Spic	Shel	W	Shel	½Fl	7.7	41.3	Woh	36x4	36x7	Bim	.....	5360	150
International 41	2100	Own	3½x5¼	19.6	L	C	Own	Fin	FS	Ens	G	Own	Own	DP	Bos	Own	Own	A	4	Own	.....	I	Own	D	9	......	Own	......	......	Own	....	3525	128
Kearns N2	1650	H-Sp 7000	3½x5	19.6	L	T	Own	H	FS	Zen	V	Pier	B.B.	DD	Ber	Dy	G-Le	U	3	ME	Math	I	Torb	D	8	24	Lav	34x3½	34x6	Way	.....	3400	136
Keystone 2	2175	Buda WU	3¾x5⅛	22.5	L	C	McC	PT	S	Zen	G	Pier	Full	DD	Ber	.....	Full	U	3	Spic	Row	I	Russ	D	8.8	26.6	Ros	34x5*	38x7*	Hoo	Gdy	4000	144
Kimball AB	3675	Wis TAU	4 x6	25.6	L	C	Flex	PT	F	Zen	V	Sim	B-Li	DP	Spl	W	B-Li	A	4	Spic	US	W	Shel	½Fl	6.5	26	Ros	36x3½	36x7	Smi	Fir	4750	Op
Kleiber BB	.....	Cont K4	4⅛x5¼	27.2	L	C	Per	C	FS	Strm	G	Sim	.....	WD	Bos	.....	B-Li	A	4	Spic	.....	W	Timk	Flot	7.75	37.51	Ros	36x4	36x7	Smi	.....	5600	153
Lange B	3350	Cont C4	4⅛x5¼	27.2	L	T	Own	H	S	Strm	G	Pier	M-E	D	Bos	.....	Cott	A	3	M&E	Per	C	Own	D	9.22	46.6	Gem	36x4	36x6	Hoo	Opt	5200	148
Luedinghaus K	2790	Wau RU4R	4¼x5¾	28.9	L	G	Own	PT	FS	Sheb	G	Wau	B.B.	.....	Spl	.....	Det	U	3	Spic	Tut	W	Wis	½Fl	8.6	26.6	Lav	36x4	36x7	Bim	.....	4400	145
Luedinghaus K-LS	2890	Wau RU4R	4¼x5¾	28.9	L	C	Own	PT	FS	Sheb	G	Wau	B.B.	.....	Spl	.....	Det	U	3	Spic	Tut	W	Wis	.....	8.6	26.6	Lav	36x4	36x7	Bim	.....	4500	170
*Maccar H-A	.....	Cont K-4	4⅛x5¼	27.2	L	C	Own	Fin	F	Zen	G	Mue	B-Li	DD	Eis	Bos	B-Li	U	4	Spic	Mer	W	Timk	Flot	8.5	45.47	Ros	36x4	36x4†	Day	.....	5300	162
*Mack AB2	3300	Own AB	4 x5	25.6	L	C	Own	C	S	Zen	G	Own	Own	DD	Spl	.....	Own	U	4	Spic	Mer	C	Own	D	6.9	28.01	Own	36x4	36x4†	.....	.....	5100	Op
*Mack AB2	3750	Own AB	4 x5	25.6	L	C	Own	C	S	Zen	G	Own	Own	DD	Spl	.....	Own	U	4	Spic	Mer	R	Own	Flot	7.6	30.40	Own	36x4	36x4†	.....	.....	5200	Op
Master Z	2290	Buda OU	4⅛x5½	27.2	L	C	Chic	PT	S	Mas	V	McC	Full	DP	Eis	.....	Full	U	3	Spic	Det	W	Own	Flot	Opt	Opt	Ros	34x3½	34x5	Pru	.....	4000	142
Menominee D	2875	Wis TAU	4 x6	25.6	L	C	Own	Fin	FS	Strm	G	Mon	Det	DP	Eis	Opt	Cott	U	4	Spic	Tut	W	Wis	½Fl	8.6	45.13	Ros	36x4	36x8	Stn	Fir	4870	144
Nash 3018	2150	Own 4	3¾x5¼	22.5	L	C	.....	.....	F	Strm	G	Sim	B.B.	DP	Eis	AL	.....	A	4	Own	Mat	I	Clark	D	9	39.6	Lav	34x4	34x7	AuW	.....	3850	144
Nash Quad 4017	2750	Buda HU	4¼x5½	28.9	L	C	.....	.....	F	Strm	G	Sim	B.B.	DP	Eis	.....	.....	A	4	Spic	Mat	I	Own	D	8.5	42.3	Lav	36x5	36x5	.....	.....	6250	124
Netco DK	‡3100	Cont K4	4⅛x5¼	27.2	L	C	E-M	PT	F	Zen	V	.....	B-Li	DP	Eis	.....	B-Li	A	4	Hart	Per	W	Timk	Flot	7.75	41.46	Ros	36x4	36x7	Arc	Gdy	5200	150
Niles E	3000	Cont C4	4⅛x5¼	27.2	L	C	Mod	Own	FS	Strm	G	Mon	B.B.	D	Eis	.....	Covt	A	3	Bld	IC	W	Timk	Flot	8.5	28	Gem	36x4	36x7	Hoo	Fir	5800	140
Northway B2	3300	Own	4 x6	25.6	H	C	GO	C	F	Strm	V	Pier	Full	DP	Wag	Bj	Full	U	4	Spic	Per	W	Shel	½Fl	7.75	37.2	Ros	36x4	36x4†	Cla	Fir	5875	161
Oneida B	2825	Hin 400	4 x5¼	25.6	L	C	Mod	C	F	Strm	V	Hin	Full	DD	Apo	.....	Full	A	3	Pet	Math	W	Wis	½Fl	8.25	33	Ros	36x3½	36x6	Pru	.....	5100	144
Oshkosh AA4	3400	H-Sp7000	3½x5	19.6	L	T	Own	C	FS	Zen	V	Dup	B-Li	DP	NE	NE	B-Li	U	4	Pet	Tut	B	Own	Flot	8.2	33	Ros	36x6*	36x6*	Bim	Fir	4350	165
Oshkosh A4	3250	H-Sp7000	3½x5	19.6	L	T	Own	C	FS	Zen	V	Dup	B-Li	DP	NE	NE	B-Li	U	4	Pet	Tut	B	Own	Flot	8.2	33	Ros	36x6*	36x6*	Bim	Fir	4200	130
Packard EC	3100	Own	4 3/16x5½	28.1	L	C	....	Fin	F	Own	P	Own	Own	DP	Spl	Bj	Own	A	4	Spic	.....	W	Own	Flot	7.25	33.3	Own	36x4	36x7	.....	.....	5050	144
Packard EX	3500	Own	4 3/16x5½	28.1	L	C	....	Fin	F	Own	P	Own	Own	DP	Spl	Bj	Own	A	4	Spi	.....	W	Own	Flot	8	36.7	Own	36x6*	40x8*	.....	.....	5200	144
Patriot Lincoln Special	2050	Hin HAA-400	4 x5¼	25.6	L	C	Own	PT	F	Strm	V	.....	Cont	DD	Spl	.....	Full	A	4	Ther	Mar	W	Dun	½Fl	7.25	34.43	Ros	34x4	34x6	Bim	Gdy	3900	140
Penn	2700	Buda MU	3⅝x5⅛	21	L	C	GO	PT	FS	Zen	G	.....	Full	DP	Bos	Bos	Full	U	3	Spic	Row	W	Wis	½Fl	9.25	37	Full	34x5	38x7	Smi	Gdy	3975	144
Pierce Arrow X5	3200	Own	4 x5½	25.6	T	C	Own	Fin	F	Strm	F	Own	Own	DD	Del	Opt	Own	A	4	.....	SP	W	Own	½Fl	9.66	50.2	.....	36x4	36x4†	Day	.....	6400	150
Pittsburgher A	3000	Own	3⅝x5	21.2	T	C	GO	Fin	F	Strm	V	.....	B-Li	DP	Bos	.....	B-Li	U	4	Spic	IC	W	Own	.....	8.75	46.8	Ros	36x4	36x7	Smi	.....	5000	152
Rainier R28	2950	Cont K4	4⅛x5¼	27.2	L	T	EM	Fin	FS	Zen	V	Pier	B-Li	DP	Eis	.....	B-Li	A	3	Spic	SP	W	Shel	.....	8.7	28.83	Ros	34x4	34x6	.....	Fir	3850	156
*Ranger TK-20-2	2450	Wis CAU	3¾x5	22.5	L	C	Bus	Fin	F	Zen	G	Sim	Full	PT	Spl	.....	Full	U	3	UP	Stan	W	Tim	½Fl	9.25	29.97	Dit	36x6*	38x7*	Bim	Fir	3700	136
Rowe CD W2	3300	Wis EAU	4 x5	25.6	L	C	Fed	H	F	Zen	G	Sim	B-Li	DP	Bos	.....	B-Li	U	4	Spic	Shel	W	Shel	½Fl	7.7	31	Ros	34x4	36x3½†	Hoo	.....	4500	142
*Ruggles 40	1795	Own	4 x5	25.6	L	G	Per	C	F	Strm	G	.....	B-Li	DD	Bos	.....	B-Li	U	4	Spic	Det	R	Own	½Fl	7	37.45	Jac	34x5*	34x7	Nor	Fir	4200	148
Sanford W25	.....	Cont C4	4⅛x5¼	27.2	L	G	McC	Fin	F	Strm	G	Pier	B.B.	DP	Eis	.....	B-Li	A	4	Spic	Per	W	Shel	½Fl	8.7	34.8	Ros	36x4	36x4†	Hoo	Fir	5330	174
Schacht	3200	Buda ETU	4¼x5½	28.9	L	C	Own	PT	F	Sheb	G	Dup	BB	D	Bos	.....	Own	A	4	M&E	Nat	W	Own	Flot	8.66	41	Own	36x4	36x7	StM	.....	6200	156
*Schwartz K	3000	Buda CTU	3¾x5¼	22.5	L	C	Fed	H	F	Strm	G	Mon	Full	DP	Bos	.....	Full	U	4	M-E	Row	W	Shel	½Fl	7.75	37.2	Ros	34x3½	34x7	Sch	Fir	3990	146
*Service 32	.....	Buda IU	4 x5½	25.6	L	C	McC	Fin	F	Strm	V	.....	B.B.	DP	Eis	.....	B-Li	A	4	Spic	.....	W	Timk	½Fl	7.75	37.5	Ros	36x3½	36x7	Bim	.....	4850	150
*Service 37	.....	Buda HU	4¼x5½	28.9	L	C	McC	Fin	F	Strm	V	.....	B.B.	DP	Eis	.....	B-Li	A	4	M-E	Shel	W	Timk	½Fl	7	33.8	Ros	35x5*	38x7*	Bim	Fir	4900	150

‡Chassis only.

Trade Name and Model	Chassis Price	ENGINE DETAILS: 1 Make and Model Number 4 Cylinder unless otherwise noted	Bore and Stroke	N. A. C. C. Horsepower	2 Valve Arrange't	3 How Cooled	4 Radiator (Make)	5 Radiator (Type)	6 Lubrication	7 Carburetor	8 Fuel Feed	9 Governor (Make)	10 Clutch (Make)	11 Clutch (Type)	12 Ignition System	13 Engine Starter	GEARSET: 14 Make	15 Location	Speeds	16 Universal (Make)	17 Springs (Make)	REAR AXLE: 18 Final Drive	19 Make	20 Type	Total Gear Reduction in High	Total Gear Reduction in Low	21 Steering Gear (Make)	TIRES, WHEELS, RIMS: *Pneumatic †Dual: Front	Rear	22 Wheels (Make)	23 Rim Equipment	Chassis Weight (Stripped)	Wheelbase
2 Ton—Con'd																																	
Southern 20	2990	Buda HTU	4¼x5½	28.9	L	C	Own	PT	S	Zen	V	Pier	Full	DD	Bos	.....	Full	U	4	.....	Shel	W	Shel	.....	.....	.....	Ros	36x4	40x8	.....	.....	.....	150
Sterling 2	3085	Ster FU	4x5¾	25.6	L	C	Own	PT	F	Zen	V	Wau	B-Li	DD	Eis	.....	B-Li	U	4	Spic	Mat	W	Timk	Flot	7.7	41.19	Ros	36x4	36x6	Pru	.....	5725	142
*Stewart 7	2190	Cont C2	4⅛x5¼	27.2	L	G	Bus	Fin	FS	Zen	G	Pier	Full	DP	Eis	.....	Full	U	3	Hart	Det	I	Clark	D	9	27	Ros	34x4†	34x8	Cla	Gdy	4460	156
*Stoughton D	2490	Her CU3	4 x5½	25.6	L	C	Own	Fin	F	Strm	G	Dup	B-Li	DD	Eis	.....	B-Li	U	4	Ther	Own	W	Shel	½Fl	8.66	35	Ros	36x4	36x7	Roy	Gdy	4600	140
Superior E	2600	Cont C2	4⅛x5¼	27.2	L	A	Idl	C	F	Strm	V	Pier	Full	DD	Eis	.....	Full	U	3	Arv	Tut	I	Torb	D	9	23.2	Ros	36x4	36x6	Sch	Fir	3600	144
Titan 2	.....	.....	4 x5½	25.6	L	C	BW	PT	F	Strm	G	Sim	B.B.	DD	Eis	.....	Cott	U	4	Pet	Shel	I	Own	D	8	42	Woh	34x4	36x7†	Bim	.....	4400	156
Traffic 4000C	1595	Cont N4	3¾x5	22.5	L	T	Own	C	FS	Cart	G	.....	Covt	DP	Bos	.....	Covt	U	3	Ther	Det	I	Russ	D	7	25.62	Own	34x3½	34x5	Opt	Fir	3175	132
Transport 35	1885	Cont N	3¾x5	22.5	L	T	.....	.....	FS	Strm	G	Dup	Full	DP	Eis	.....	Full	...	4	Hart	Det	I	Clark	.....	7.6	36.4	Jac	36x3½	36x6	.....	.....	4000	140
Traylor C	2850	Buda ITU	4 x5½	25.6	L	P	GO	Fin	F	Zen	G	Pier	Covt	DD	Spl	.....	Covt	U	3	M-E	Mer	W	Shel	½Fl	7.75	.....	Ros	36x4	36x7	Sch	.....	5100	146
Triangle C	2285	Wau BUX	3¾x5¼	22.5	L	C	Per	ZZT	FS	Strm	G	Wau	Full	DD	Eis	.....	Full	U	3	UP	Det	I	Clark	D	9.1	27	Gem	36x4	36x7	Roy	Fir	4200	147
Triumph 2	2550	Buda CTU	3¾x5¼	22.5	L	C	Mod	PT	F	Kng	V	Pier	B.B.	D	Spl	.....	Cott	U	4	UP	Tut	W	Wis	½Fl	7.75	40.3	Lav	36x4	36x7	Stn	Stn	5000	144
Twin City	2750	Buda ITU	4 x5½	25.6	L	C	Spi	H	F	Sheb	V	Sim	Full	D	Bos	.....	Full	U	3	Arv	Math	I	Clark	D	8	32	Ros	36x6	40x8	Bim	Fir	4800	150
Ultimate AJ	3200	Buda HTU	4¼x5½	28.9	L	C	Own	PT	F	Strm	G	Pier	B-Li	DD	Eis	Bos	B-Li	U	4	Spic	Shel	W	Shel	½Fl	6.5	34.7	Ros	35x5*	38x7*	Jon	Fir	4500	140
Ultimate AJL	3250	Buda HTU	4¼x5½	28.9	L	C	Own	PT	F	Strm	G	Pier	B-Li	DD	Eis	Bos	B-Li	U	4	Spic	Shel	W	Shel	½Fl	6.5	34.7	Ros	35x5*	38x7*	Jon	Fir	4590	156
Vim 22	3150	Her C2	3¾x5⅛	22.5	L	P	McC	Fin	F	Zen	G	Dup	B-Li	D	Spl	.....	B-Li	U	4	Spic	Shel	W	Shel	.....	7.75	.....	Gem	36x4	36x6	Smi	.....	4700	142
Walker-Johnson A	2250	Buda WU	3¾x5½	22.5	L	T	Bus	Fin	F	Zen	V	.....	Full	DD	Eis	.....	Full	U	3	Spic	SP	W	Timk	½Fl	7.75	.....	Ros	34x3½	34x6	Jon	.....	4150	140
Walter N	3750	Own FU	4 x5¾	25.6	L	C	Bus	PT	F	Strm	G	Wau	B-Li	D	Eis	W	B-Li	A	4	Own	.....	.....	Own	Flot	7.25	36	Gem	36x4	36x7	.....	.....	5500	144
White 20	3250	Own	3¾x5⅛	22.5	L	C	.....	C	FS	Own	G	.....	Own	D	.....	.....	Own	A	4	Own	.....	R	Own	½Fl	.....	.....	Own	36x4	36x7	.....	.....	4500	157
Wichita M	2400	Wau BX	3¾x5¼	22.5	L	G	.....	PT	F	Strm	G	Wau	Own	C	Wag	.....	B-Li	A	4	Own	Det	W	Shel	½Fl	8.6	45.03	Ros	36x3½	36x6	Bim	Fir	4400	144
Wisconsin (Loganville)	1450	HSp 7000	3½x5	19.6	L	T	.....	.....	FS	Strm	V	.....	B.B.	WP	Bos	Dy	Det	U	3	UP	Har	I	Torb	D	8.	.....	Lav	34x5*	36x6*	.....	.....	3200	136
Witt Will P	2750	Cont C4	4⅛x5¼	27.2	H	G	Mod	Opt	FS	Zen	G	Pier	B-Li	DD	Eis	.....	B-Li	U	3	Spic	Del	W	Tim	Flot	7.75	.....	Ros	36x3½	36x7	Arc	.....	5000	144
*Wolverine J2	2245	Cont J4	3¾x5	22.5	L	G	Lng	Fin	F	Strm	G	Phar	Full	DD	Dix	AL	Full	U	3	UP	Am	I	Russ	D	8.8	35.2	Gem	34x4	34x7	Hay	Gdy	4300	148
2½ Ton																																	
Acason H	.....	Wau CU	4⅜x5¾	30.6	L	P	Can	C	FS	Sheb	V	Wau	Det	.....	Eis	.....	Cott	A	4	Bld	Det	W	Timk	Flot	7.75	40.3	Ros	36x4	36x8	Sch	Opt	5400	150
Ace 2½	.....	Buda HU	4¼x5½	28.9	L	C	Mod	ZZT	F	Zen	V	Pier	Full	DP	Eis	W	Full	A	4	UM	Math	W	Timk	Flot	8.50	34	Ros	36x4	36.7	Day	Fir	5630	156
Acme 60	.....	Cont K4	4⅛x5¼	27.2	L	C	GO	Fin	F	Rayf	V	Dup	B.B.	DP	Eis	DJ.	Cott	U	4	Bld	Det	W	Timk	Flot	9.25	48.10	Ros	36x4	36x7	Bim	.....	4830	148
American	3350	Wis	4 x6	25.6	L	G	GO	Fin	F	Strm	G	Own	Det	D	Apo	.....	Cott	U	4	Acm	SP	W	Thom	Flot	8.33	.....	Ros	36x4	34x4†	.....	.....	5000	158
*Apex E	2695	Buda HU	4¼x5½	28.9	L	C	GO	C	F	Strm	V	Dup	Full	D	Eis	Op	Full	U	3	Bld	Det	I	Torb	D	9	27	Lav	36x4	36x6	Roy	Fir	4500	150
Armleder HWB	3200	Buda HTU	4¼x5½	28.9	L	P	Lng	Fin	F	Zen	G	Phar	B-Li	DD	Bos	W	B-Li	U	4	Spic	Math	W	Timk	Flot	9.25	49.5	Ros	36x4	36x7	StM	.....	4900	148
Armleder HWC	3200	Cont C4	4⅛x5¼	27.2	L	P	Lng	Fin	S	Zen	G	Phar	B-Li	DD	Bos	W	B-Li	U	4	Spic	Math	W	Timk	Flot	9.25	49.5	Ros	36x4	36x7	StM	.....	4900	148
Atco A	.....	Bud HU	4¼x5½	28.9	L	C	Chic	PT	F	Strm	G	Pier	Full	D	Eis	.....	Full	A	4	Hart	Shel	W	Wis	.....	8.7	41.6	Ros	36x4	36x7	Smi	.....	4900	150
Atterbury 7CX LWB	3275	Cont C4	4⅛x5¼	27.2	L	C	Own	Fin	S	Zen	G	Mon	B-Li	DD	Ber	.....	B-Li	U	4	Spic	SP	W	Timk	Flot	9.25	44.77	Gem	36x4	36x4†	Arc	Fir	5520	171
Atterbury 7CX STD	3175	Cont C4	4⅛x5¼	27.2	L	C	Own	Fin	S	Zen	G	Mon	B-Li	DD	Ber	.....	B-Li	U	4	Spic	SP	W	Timk	Flot	9.25	44.77	Gem	36x4	36x4†	Arc	Fir	5360	153
Available 2½	3160	Her CU3	4 x5⅛	25.6	L	C	Chic	Fin	FS	Strm	V	Pier	B-Li	DD	Bos	.....	B-Li	A	4	M-E	Tut	W	Timk	Flot	7.75	40.3	Ros	36x4	36x8	Sch	.....	4750	152
Bell O	2550	Buda	4¼x5½	28.9	L	C	Chic	PT	F	Strm	V	Dup	B.B.	DP	Eis	.....	Det	U	3	UP	Det	I	Russ	D	8	38.4	Gem	34x4	34x7	Bim	Fir	4200	146
Bessemer J2	.....	Cont C2	4⅛x5¼	27.2	L	C	Std	C	FS	Strm	G	Pier	B.B.	DP	Bos	.....	B-Li	A	4	Arv	Per	R	LM	½Fl	.....	.....	Ros	36x4	36x4†	Sch	Fir	4800	158
Bridgeport 2½B	2990	Buda HTU	4¼x5½	28.9	L	G	Own	Fin	FS	Strm	G	Pier	B.B.	D	Eis	.....	B-Li	U	4	Hart	Per	W	Timk	Flot	8.25	.....	Ros	36x4	36x4†	Jon	Fir	5500	156
Brinton D	2975	Cont C4	4⅛x5¼	27.2	L	C	Chic	PT	F	Strm	G	Pier	B-Li	D	Bos	.....	B-Li	U	3	Spic	Tut	W	Timk	Flot	.....	33.6	Ros	36x4	36x6	Smi	.....	4900	150
Brockway K5	.....	Cont K4	4⅛x5¼	27.2	L	C	Bus	Fin	F	Strm	V	Phar	B-Li	DD	Eis	.....	B-Li	A	4	Spic	Mer	W	Timk	Flot	7.75	41.5	Gem	36x4	36x8	Hoo	.....	5260	153
Chicago C2½	.....	Her CU3	4 x5⅛	25.6	L	C	Brm	PT	F	Strm	G	Sim	B-Li	D	Bos	.....	B-Li	U	4	Pet	Math	W	Timk	Flot	7.75	34	Gem	36x4	36x7†	Opt	Stn	5200	156
*Clydesdale 65EX	3450	Cont	4½x5½	32.4	L	C	Own	PT	FS	Zen	G	Own	B-Li	DD	Bos	.....	B-Li	A	4	Spic	Stan	W	Timk	Flot	8.5	45.5	Ross	36x4	36x4†	Smi	.....	5400	163
*Clydesdale 65 X	3250	Cont	4⅛x5¼	27.2	L	C	Own	PT	FS	Zen	G	Own	B-Li	DD	Bos	.....	B-Li	A	4	Spic	Stan	W	Timk	Flot	8.5	45.5	Ros	36x4	36x4†	Smi	.....	5140	163
Collier 22	.....	Cont C4	4⅛x5¼	27.2	T	P	Lng	PT	FS	Zen	V	Pier	Full	DP	Eis	.....	Full	U	4	UP	Math	W	Timk	Flot	8.5	40.8	Ros	36x4	36x4†	Bim	Fir	5445	165
Commerce 18	2495	Cont C	4⅛x5¼	26.2	L	P	Lng	Fin	S	Zen	V	.....	B&B	DP	Eis	Bj	B-Li	U	4	Spic	Am	I	Torb	D	7	28.8	.....	36x6	40x8	.....	Fir	4150	149
Concord B	3600	Buda HTU	4¼x5½	28.9	L	C	Bus	PT	F	Zen	G	Mon	B-Li	DP	Eis	.....	B-Li	U	4	Spic	Per	W	Timk	Flot	9.25	37	Ros	36x4	36x8	Arc	Fir	5450	150
Corbitt B-22	3000	Cont C4	4⅛x5¼	27.2	L	C	McC	Fin	FS	Strm	V	Sim	B-Li	DD	Eis	.....	B-Li	U	4	Hart	Shel	W	Shel	½Fl	8.75	35	Ros	36x4	36x7	Bim	Fir	5325	152
Dart M	.....	Buda HU	4¼x5½	28.9	L	C	Own	C	F	Zen	G	Pier	Full	DD	Eis	.....	Full	U	4	Spic	Per	W	Own	.....	8.5	40.8	Ros	36x4	36x7	Pru	.....	4800	150
Day Elder C	2750	Buda HTU	4¼x5½	28.9	L	C	Bus	Fin	F	Zen	G	Mon	Covt	DD	Eis	.....	Covt	U	4	Hart	IC	W	Shel	½Fl	8.75	41.56	Gem	36x4	36x7	Jon	Fir	4600	150
Dependable D	2650	Buda ITU	4 x5½	25.6	L	C	Lng	Fin	F	Zen	V	Mon	Full	DD	Spl	AL	Full	U	3	Acm	Per	W	Wis	½Fl	8.5	35.75	Ros	36x4	36x7	Bim	Fir	5300	144
Diamond T-U	2650	Hin	4 x5¼	25.6	L	C	GO	Fin	F	Strm	V	Own	Covt	DD	Bos	.....	Covt	U	4	Spic	Math	W	Timk	Flot	7.8	36.81	Gem	36x4	36x7	.....	.....	4800	160
D-Olt C	3250	Midwest	4⅛x5¼	27.2	H	C	G-O	PT	F	Zen	G	Dup	B-Li	DD	Bos	.....	B-Li	U	3	Spic	SP	W	Timk	.....	8.5	.....	Ros	36x5	36x4†	.....	.....	5350	168
Erie A2½	.....	Buda ETU	4¼x5½	28.9	L	C	Fed	C	FS	Zen	G	Dup	Full	D	Bos	.....	Full	A	4	Spic	Per	W	Shel	½Fl	8.7	41.7	Ros	36x4	36x4†	Bim	Fir	5760	150
Facto	2295	Buda ETU	4¼x5½	28.9	L	C	Bus	PT	FS	Zen	V	Pier	Full	D	Spl	.....	Full	A	4	Spic	SP	W	Timk	Flot	7.75	33.9	Ros	36x4	36x8	Smi	Fir	5800	155
Garford 70 H	2750	Buda HTU	4¼x5½	28.9	L	C	Own	Fin	F	Strm	G	Sim	.....	DD	Spl	.....	Own	A	4	Spic	Per	W	Timk	Flot	7.75	.....	Ros	36x4	36x7	.....	.....	5300	144
Gary J	2650	Buda HTU	4¼x5½	28.9	L	C	Chic	Fin	FS	Mas	G	McC	Full	DD	Eis	.....	Full	U	4	Spic	Math	W	Timk	Flot	8.5	41	Ros	36x4	36x8	Pru	Gdy	4850	148
Gersix K	3500	Buda HTU	4¼x5½	28.9	L	C	Idl	C	F	Strm	V	Mon	B.B.	.....	Bos	.....	Cott	U	3	Bld	Tut	W	Own	.....	9.6	39	Ros	36x4	36x8	Jon	.....	5270	150
Giant 16	3150	Cont C4	4⅛x5¼	27.2	L	P	Own	.....	FS	Sheb	G	Mon	B-Li	DD	Eis	.....	B-Li	U	3	Spic	Math	W	Timk	Flot	8.8	29.09	Ros	36x4	36x7	Way	.....	4500	168
Giant 16	3050	Cont C4	4⅛x5¼	27.2	L	P	Own	.....	FS	Sheb	G	Mon	B-Li	DD	Eis	.....	B-Li	U	3	Spic	Math	W	Timk	Flot	8.8	29.9	Ros	36x4	36x7	Way	.....	4500	144
Hall 2½ Worm	.....	Cont C4	4⅛x5¼	27.2	L	P	Own	H	FS	Zen	G	Dup	B-Li	DP	Bos	.....	B-Li	U	3	Opt	Det	W	Timk	Flot	7.7	.....	Gem	36x4	36x4	Smi		4525	156
Harvey WFA	2950	Buda ETU	4¼x5½	28.9	L	C	Own	Fin	F	Strm	G	McC	Full	DD	Eis	.....	B-Li	A	4	Spic	Shel	W	Shel	½Fl	7.75	37.5	Ros	36x4	36x7	StM	.....	5600	160
Hendrickson N	2690	Buda ETU	4¼x5½	28.9	L	C	Chic	PT	F	Strm	G	McC	Full	D	Spl	.....	Full	A	4	Ther	Tut	W	Timk	Flot	7.7	37.2	Ros	36x4	36x7	Stn	.....	.....	Op
H. R. L., H.	3650	Hink HAA	4 x5¼	25.6	L	C	Fed	Fin	F	Zen	V	Hink	B-Li	DP	Bos	GD	B-Li	U	4	Spic	Shel	W	Shel	.....	8.75	30.	Ros	36x4	36x4†	Sch	Gdy	5310	154
Hurlburt 2½	.....	Buda HU	4¼x5½	28.9	L	G	Own	.....	F	Flch	G	Dup	B-Li	D	Eis	.....	B-Li	U	3	Spic	Per	W	Own	.....	.....	.....	Ros	36x4	36x4	Way	.....	5600	170
Huron-Michigan	2790	Buda ETU	4¼x5½	28.9	L	C	.....	Fin	F	Zen	V	Pier	B.B.	D	Bos	.....	Cott	U	4	Det	Det	I	Clark	D	8	41.6	Jac	36x6*	40x8*	AuW	Fir	.....	156
*Independent HI (Iowa)	2940	Cont C4	4⅛x5¼	27.2	L	C	Chic	PT	FS	Strm	V	.....	Full	DD	Bos	.....	Full	U	4	Bld	Tut	I	Russ	D	10	.....	Lav	36x4	36x7	StM	Fir	4950	156
Indiana 25	.....	Own 38	4⅛x5½	27.2	L	C	McC	Fin	F	Strm	G	Pier	B.B.	DP	Eis	.....	B-Li	A	4	Spic	Shel	W	Shel	½Fl	7.75	41.3	Woh	36x4	36x8	Day	.....	5850	156
International 52-Bus	3200	Own	4¼x5	28.9	H	T	Own	Fin	FS	Ens	V	Own	Own	DP	Spl	Own	Own	A	4	Own	.....	I	Own	D	4.85	28.8	Own	.....	.....	Own	.....	.....	190
Kalamazoo HD	3350	Wis UAU	4¼x6	28.9	L	P	GO	PT	F	Strm	V	Pier	Full	D	Bos	Dy	Full	A	4	B.B.	Shel	W	Shel	½Fl	9.5	57	Ros	36x5	36x10	Smi	.....	6720	144
Kalamazoo NH	3145	Wis TAU	4 x6	25.6	L	P	GO	PT	F	Strm	V	Pier	Full	D	Bos	Dy	Full	A	4	B.B.	Shel	W	Shel	½Fl	8.75	42.8	Ros	36x5	36x10	Smi	.....	6400	160
Kelly Springfield K35	2900	Own	3¾x5¼	22.5	L	C	Lng	Fin	F	Zen	G	Pier	Own	C	Eis	W	Covt	A	3	Own	Per	C	Own	D	10.6	35.11	Gem	36x4	36x4†	StM	.....	5000	Op
Kelly Springfield K38	2900	Own	3¾x5¼	22.5	L	C	Lng	Fin	F	Zen	G	Pier	B&B	D	Eis	W	Covt	A	4	Spic	Per	W	Own	½Fl	10.3	34.2	Gem	36x4	36x4†	StM	.....	5200	Op
Kimball AC	3975	Wis UAU	4¼x6	28.9	L	C	Flex	PT	F	Zen	V	Sim	B-Li	DP	Spl	W	B-Li	A	4	Spic	US	W	Shel	½Fl	7.75	37.31	Ros	36x4	36x8	Smi	Fir	5000	Op
Kissel Freighter	2875	Own 50000*	[illegible]	[illegible]	L	C	McC	PT	S	Strm	V	Pier	W-Gr	DP	Eis	.....	W-Gr	A	4	Spic	Mat	W	Timk	Flot	8.5	42.5	Jac	36x4	36x7	Pru	.....	5100	[illegible]

Kleiber B		Cont L4	4½x5½	32.4	L	C	RT	PT	FS	Strm	G	Sim		DD	Bos		B-Li	A	4	Spic		W	Timk	Flot	7.75	37.51	Ros	36x5	36x8	Sm		6000	160
Koehler M	3175	Her	4 x5½	25.6	L	G	Own	PT	F	Zen	G	Sim	B-Li	DD	Spl		B-Li	A	4	Spic	Math	W	Timk	Flot	9.25	37	Lav	36x4	36x7	Way		5050	162
Koehler MCS	3275	Her	4 x5½	25.6	L	G	Own	PT	F	Zen	G	Sim	B-Li	DD	Spl		B-Li	A	4		Math	W	Timk	Flot	9.25	37	Lav	36x4	36x7	Way		5000	150
Lange E	3450	Cont K4	4 1⅛x5¼	27.2	L	C	Own	H	F	Strm	V		B-Li	DP	Bos		B-Li	A	4	Spic	SP	W	Timk	Flot	9.25	49.5	Ros	36x4	36x7	Hos	Opt	5600	153
Larrabee K	3100	Cont C4	4 1⅛x5¼	27.2	L	C	Bus	Fin	S	Zen	G	Sim	B-Li	DD	Bos		B-Li	A	4	Opt	Mer	W	Shel	½Fl	8.7	35	Ros	36x4	36x7	Hoo		5700	176
*Mack AB 2½	3400	Own A B	4 x5	25.6	L	C	Own	C	S	Zen	G	Own	Own	DD	Spl		Own	U	4	Spic	Mer	C	Own	D	6.99	28.01	Own	36x4	36x4†			5200	Op
*Mack AB 2 ½	3850	Own A B	4 x5	25.6	L	C	Own	C	S	Zen	G	Own	Own	DD	Spl		Own	U	4	Spic	Mer	R	Own	Flot	9.25	37.10	Own	36x4	36x4†			5300	Op
Master DD	3190	Buda HU	4½x5½	28.9	L	C	Chic	PT	FS	Mas	V	McC	Full	DP	Eis		Full	U	4	Spic	Det	R	Walk	Flot	Opt	Opt	Ros	34x4	36x7	Wal		4500	144
Master DDL	3290	Buda HU	4½x5½	28.9	L	C	Chic	PT	FS	Mas	V	McC	Full	DP	Eis		Full	U	4	Spic	Det	R	Walk	Flot	Opt	Opt	Ros	34x4	36x7	Wal		4600	170
Master W	2890	Buda HU	4½x5½	28.9	L	C	Chic	PT	FS	Mas	V	McC	Full	DP	Eis		Full	U	4	Spic	Det	W	Timk	Flot	Opt	Opt	Ros	34x4	36x7	Pru		4500	144
Master WL	2990	Buda HU	4½x5½	28.9	L	C	Chic	PT	FS	Mas	V	McC	Full	DP	Eis		Full	U	4	Spic	Det	W	Timk	Flot	Opt	Opt	Ros	34x4	36x7	Pru		4600	170
Moreland AX	3500	Cont L4	4½x5½	32.4	L	C	Own	C	F	Mas	P			DD	Spl		Own	A	5	Ther	US	W	Timk	Flot	6.8	40.94	Ros	36x5	36x10	Smi		5800	160
*Nelson & LeMoon G3		Cont K4	4 1⅛x5¼	27.2	L	C	Chic	Fin	F	Strm	G	Phar	B-Li	DD	Bos	W	B-Li	U	3	Own	Tut	W	Timk	Flot	7.7		Ros	36x4	36x7	Pru	Gdy	4100	Op
Netco HL	‡3500	Cont L-4	4½x5½	32.4	L	C	E-M	PT	F	Zen	V		B-Li	DP	Eis		B-Li	A	4	Eas	Math	W	Timk	Flot	7.75	41.46	Gem	36x4	36x8	Arc	Gdy	5750	168
Noble D–51	2950	Buda HU	4½x5½	27.2	L	C	Chg	Fin	F	Strm	V	Pier	Full	DP	Eis	W	Full	A	4	ME		W	Shel	½Fl	8.75	42	Lav	36x4	36x8	Bim	Fir	5700	162
Ogden E2½		Cont C 2	4 1⅛x5¼	27.2	L	C	Chic	Fin	FS	Strm	G	Pier	B-Li	DD	Spl		B-Li	A	4	M-E	Tut	W	Shel	½Fl	8.7		Ros	36x4	36x8	Stn		5600	160
*O. K. 2½ T	2900	Buda HTU	4¼x5½	28.9	L	G	RT	PT	FS	Zen	V	Pier	Full	DD	Eis		Full	U	4	Hart	Cham	W	Wis	½Fl	9.66	41.5	Ros	36x4	36x8	Bim		5350	150
Old Reliable B	3500	Wis UAU	4¼x6	28.9	L	C	Chic	PT	F	Strm	V	Mon	Full	DD	Bos		Full	A	4	Pet	Shel	W	Shel	½Fl	7.25	42	Ros	34x4	36x4†	StM		5850	160
Olympic J	3200	Buda HTU	4¼x5½	28.9	L	C	Lng	ZZT	F	Zen	V	Pier	B-Li	D	Bos	Opt	B-Li	U	4	Ther	Lig	W	Timk	Flot	7.75	31	Ros	36x4	36x7	StM	Opt	4985	158
Oneida C	3200	Hin 400	4 x5¼	25.6	L	C	Mod	C	F	Strm	V	Hin	Full	DD	Apo		Full	A	4	Pet	Math	W	Wis	½Fl	8.6	41.6	Ros	36x4	36x7	Pru		5700	160
Oshkosh B	3850	Her CU 3	4 x5½	25.6	L	G	Own	PT	F	Strm	V	Dup	B-Li	DP	NE	NE	B-Li	U	4	Pet	Tut	B	Own	Flot	8	43	Ros	38x7	38x7	Roy	Fir	5400	146
Oshkosh BB	4000	Her CU 3	4 x5½	25.6	L	G	Own	PT	F	Strm	V	Dup	B-Li	DP	NE	NE	B-Li	U	4	Pet	Tut	B	Own	Flot	11	63	Ros	40x8	40x8	Roy	Fir	5800	165
Paige 54-20	2420	Hin HA500	4¼x5½	28.9	L	C	Own	Fin	F	Strm	V	Sim	B-Li	DD	Bos		B-Li	A	4	Spic	Per	W	Shel	½Fl	8.7	42.35	Ros	34x4	34x8	Day	Fir	5200	150
Parker G1	3200	Wis UAU	4¼x6	28.9	L	C	Own	PT	F	Strm	V	Pier	B-Li	DD	Eis	W	Full	A	4	Bld	Tut	W	Own	Flot	7.75	37.2	Ros	34x4	36x5†	Bim		5400	150
Pittsburgher C	3600	Own	4⅛x5¼	27.2	T	C	GO	Fin	F	Strm	V		B-Li	DP	Bos		B-Li	U	4	Spic	C	W	Own		9.5	50.82	Ros	36x5	36x8	Smi		6150	162
Rainier R-20	3550	Cont K-4	4 1⅛x5¼	27.2	L	G	EM	Fin	F	Zen	V	Pier	B-Li	DP			B-Li	A	4	Spi	SP	W	Timk	Flot			Ros	34x5	34x8	Way		5000	165
Rainier R-20	3650	Cont K-4	4 1⅛x5¼	27.2	L	G	EM	Fin	F	Zen	V	Pier	B-Li	DP			B-Li	A	4	Spi	SP	W	Timk	Flot			Ro	34x5	34x8	Way		5000	178
Reliance 20B	3100	Buda HTU	4¼x5½	28.9	L	C	Bus	PT	FS	Strm	G	Pier	Full	DD	Eis		Cott	A	4	Pet	Shel	P	Badg	D	7.5	39	Ros	36x4	36x4†	Bim	Gdy	5500	156
Republic 19	2195	Cont C2	4 1⅛x5¼	27.2	L	C	Own	C	FS	Strm	G	Phar	Full	DD	Bos		Full	U	4	Spic	Math	I	Torb	C	8	38.4	Jac	36x4	36x7	Nor	Fir	4281	144
Rowe CDW2½	3575	Wis NU	4¼x5	28.9	L	C	Fed	H	F	Zen	G	Sim	B-Li	DP	Bos		B-Li	U	4	Spic	Shel	W	Shel	½Fl	7.7	31	Ros	34x4	36x4*	Hoo		4800	140
Selden Unit 50	3250	Cont C4	4 1⅛x5¼	27.2	L	C	Lng	Fin	FS	Strm	G	Pier	B-Li	D	Eis		B-Li	A	4	Spic	Per	W	Timk	Flot	7.75	37.51	Gem	36x4	36x7	Stn		5400	145
Selden Unit 31	3350	Cont C4	4 1⅛x5¼	27.2	L	C	Lng	Fin	FS	Strm	G	Pier	B-Li	D	Eis	W	B-Li	A	4	Spic	Per	W	Timk	½Fl	6	32	Ros	34x5	38x7	MM	Opt	4000	147
*Service 52		Buda HU	4¼x5½	28.9	L	C	McC	Fin	F	Strm	V		B.B.	DP	Eis		B-Li	A	4	M-E	Shel	W	Timk	Flot	7.75	37.5	Ros	36x4	36x8	tim		5180	160
Signal J	2875	Cont C4	4 1⅛x5¼	27.2	L	C	McC	Fin	FS	Strm	G	Pier	B-Li	DD	Eis		B-Li	A	4	Spic	Det	W	Timk	Flot	9.25	37	Ros	34x4	36x8	StM		5240	150
Signal JL	2975	Cont C-4	4 1⅛x5¼	27.2	L	C	McC	Fin	FS	Strm	G	Pier	B-Li	DD	Eis		B-Li	A	4	Spic	Det	W	Timk	Flot	9.25	37	Ros	34x4	36x8	StM		5500	180
Standard 76	2400	Cont C2	4 1⅛x5¼	27.2	L	C	Lng	Fin	F	Strm	G	Mon	B-Li	DD	Eis		B-Li	A	4	Spic	Per	W	Timk	Flot	8.5	34	Ros	36x4	36x7			4430	140
Sterling 2½	3290	Ster CU	4½x5½	30.6	L	C	Own	PT	F	Zen	V	Wau	B-Li	DD	Eis		B-Li	U	4	Spic	Math	W	Timk	Flot	7.7	41.19	Ros	36x4	36x4†	Pru		5755	156
*Stewart 7X	2390	Buda HTU	4¼x5½	29.	L	G	Bus	PT	FF	Zen	G	Pier	Full	DP	Eis		Full	U	4	Hart	Det	I	Clark	D	9.	43.2	Ros	34x4†	34x8	CL	Fir	4860	156
Super Truck 50	3300	Wis	4 x6	25.6	L	C	Chic	Fin	F	Zen	G	Sim	Full	DD	Bos		Full	U	4	Ther	Shel	W	Shel	½Fl	8.75	42	Lav	36x4	36x8	Bim		5200	156
Tiffin MW	2700	Cont C4	4 1⅛x5¼	27.2	L	C	Own	Fin	FS	Sheb	G	Pier	Full	DD	Bos	W	Full	U	4	Pet	Kal	W	Shel		8.7	41.7	Ros	36x4	36x3½†	Smi		5125	148
Tower H2½	2475	Cont C4	4 1⅛x5¼	27.2	L	C	Own	PT	S	Strm	G	Pier	Full	DP	Eis		Full	U	3	Spic	Det	W	Timk	Flot	9.2	37	Ros	36x4	36x7	Pru	Gdy	5230	146
Triangle B	2585	Wau FU	4 x5¼	25.6	L	C	Whee	PT	F	Strm	G	Wau	Full	DD	Eis		Full	U	4	UP	Det	I	Clark	D	9.1	42	Gem	36x4	36x7	Roy	Fir	4900	150
Triumph HB-2½	2900	Buda CTU	3¾x5¼	22.5	L	C	Mod	PT	F	King	V	Pier	B.B.	D	Spl		Cott	U	4	UP	Tut	W	Wis	½Fl	7.75	40.3	Lav	36x4	36x7	Stn	Stn	4900	144
Ultimate B	3700	Buda HTU	4¼x5½	28.9	L	G	Own	PT	F	Strm	G	Pier	B-Li	DD	Eis	Bos	B-Li	U	4	Spic	Shel	W	Shel	½Fl	7.75	30.2	Ros	36x4	36x8	Jon	Fir	5340	154
Union F	3150	Wis TAU	4 x6	25.6	L	G	GO	Fin	F	Sheb	G	Dup	Full	DD	Eis	LN	Full	U	4	UP	Math	I	Russ	D	7.8	37.4	Ros	36x5	36x8	Pru		5800	155
Union FW	3490	Wis TAU	4 x6	25.6	L	G	GO	Fin	F	Sheb	G	Dup	Full	DD	Eis	LN	Full	U	4	UP	Math	R	Walk		7.86	37.7	Ros	36x5	36x8	Pru		5900	155
United B2½	3150	Buda ETU	4¼x5½	28.9	L	C	Mod		F	Strm	G	Sim	Full	DD	Eis	Op	Full	A	4	Spic	Shel	W	Shel	D	8.75	39.12	Lav	36x4	36x7	Pru		4940	151
Ursus V-50	3250	Buda ETU	4¼x5½	28.9	L	C		PT	FS	Strm		Pier	B-Li	DP	Spl		B-Li		4	Ther		W	Timk	Flot			Ros	Opt	Opt	Roy			Op
Vulcan 25	4500	Wis U A U	4¼x6	28.9	L	C			F	Zen	G	Pier	B-Li	D	Eis		B-Li		4	Spic	Shel	W	Shel	½Fl	Op	Op	Ros	36x6*	40x8*	Smi		6200	Op
Walker-Johnson B	2750	Buda HU	4¼x5½	28.9	L	G	Bus	PT	F	Zen	G	Pier	B-Li	D	Eis		Opt	A	4	Spic	Per	W	Timk	Flot	8.5		Ros	36x4	36x8	Arc		5000	150
Walter M	3850	Own FU	4 x5¼	25.6	L	C	Bus	PT	F	Strm	G	Wau	B-Li	D	Eis	W	B-Li	A	4	Own		R	Own		7.25	36	Ros	36x4	36x4†			5600	168
Ward LaFrance 2B	2990		4⅝x5¾	30.6	L	C	Own	Fin	F	Strm	G		B-Li	DP	Bos		B-Li	A	4	M-E	Mer	W	Timk	Flot	7.75	41.46	Ros	36x4	36x4†	Hoo		5900	158
White Hickory K		Cont C2	4 1⅛x5¼	27.2	L	C	Chi	Fin	FS	Strm	V	Sim	Full	DD	Eis		Full	U	4	M-E	Shel	W	Timk	Flot	8.5	40.8	Lav	36x4	36x7	Bim	Fir	4650	150
Wilcox CC		Own	4¼x5	28.9	L	G		PT	S	Strm	G	Dup	Own	C	Bos		Own	A	4	Own	Shel	R	Walk	½Fl	8.6	42.35	Own	36x4	36x3½†			5000	135
Wilson EA	2825	Own	4 x5½	25.6	L	G	Lng	PT	FS	Mar	G	Pier	B.B.	D	Eis		Own	A	4	Ther		W	Timk	Flot	7.7	31	Ros	36x4	36x7			4625	152
Winther 50		Wis TAU	4 x6	25.6	L	G	Brm	PT	F	Mar	V		Full	DD	Eis	W	Full	U	4	Bld	Math	I	Clark	D	9.		Ros	38x7*	42x9*	Own		5900	110
Winther 450		Wis-TAU	4 x6	25.6	L	G	Brm	PT	F	Strm	G		Full	DD	Eis	W	Full	U	3	Pet	Math	I	Clark	D	9	36	Lav	34x4	36x6	Cla		4300	150
Wisconsin (Loganville)	2000	Cont 9N–6	3½x5¼	29.3	L	T			FS	Zen	V		B.B.	NP	Bos	Dy	Det	U	3	UP	Har	I	Torb	D	8.		Lav	36x6*	38x7*			4200	140
Wisconsin C (Sauk City)	2700	Wau CU	4 x5¼	25.6	L	C	Chic	PT	F	Strm	V	Wau	B-Li	DD	Eis	Opt	B-Li	A	4	Spic	Det	W	Timk	Flot	8.75		Lav	36x6	38x7	Bim	Gdy	6200	136

3 Ton

Acme 60L		Cont L4	4½x5½	32.4	L	C	Own	Fin	F	Rayf	V	Dup	B.B.	DP	Eis	DL	Cott	U	4	Bld	Det	W	Timk	Flot	6.	31.2	Ros	36x4	36x7	Bim		5050	156
Concord BX	3600	Buda HTU	4¼x5½	28.9	L	C	Bus	PT	F	Zen	G	Mon	B-Li	DP	Eis		B-Li	U	4	Spic	Per	W	Timk	Flot	9.25	37.	Ros	36x4	36x8	Arc	Fir	5550	170
Corbitt R-22	3200	Cont E-4	4½x5½	32.4	L	C	McC	Fin	FS	Strm	V	Sim	B-Li	DD	Eis		B-Li	U	4	Hart	Shel	W	Shel	½Fl	8.75	35	Ros	36x4	36x8	Smi		6160	158
*Denby 35	2795	Cont C2	4 1⅛x5¼	27.2	L	C	Lng	PT	FS	Strm	G	Sim	Full	DD	Eis		Full	A	4	UP	Det	I	Clark	D	8.15	45.3	Ros	36x4	36x7	Smi	Fir	4920	155
Dependable E	2950	Buda HTU	4¼x5½	28.9	L	C	Lng	Fin	F	Zen	V	Mon	Full	DD	Spl	AL	Full	A	4	Acm	Per	W	Wis	½Fl	8.6	40	Ros	36x4	36x7	Bim	Fir	5800	165
Douglas I 3	2950	Buda HTU	4¼x5½	28.9	L	C	Own	PT	F	Sheb	V	Pier	Full	DP	Eis		Full	U	4	Arv	Own	W	Wis		9.1	41	Ros	36x5	36x8	Own	Fir	4750	136
Fageol 2½–3	3900	Wau CU	4⅜x5¾	30.6	L	C	Mod	C	F	Zen	V	Wau	Det	DD	Spl		Own	A	5	Spic	Math	W	Timk	Flot	5.6	59.5	Ros	36x4	36x7	Stn		4600	144
Forschler E		Cont C4	4 1⅛x5¼	27.2	L	C	EM		FS	Zen	V	Dup	Full		Bos		Full		4	Hart	Own	W	Shel				Ros	36x4	36x8	Smi		5200	144
F. W. D., B	4200	Wis A	4¼x5½	36.1	T	C	McC	PT	F	Strm	G	Pier	HS	D	Eis		Cott	A	3	Bld	Tut	B	Own	Flot	8.9	35.6	Ros	36x6	36x6	Sch		6300	124
Gersix L	4500	Buda YTU	4½x6	32.4	L	C	Idl	C	F	Strm	V	Mon	B.B.		Bos		Cott	A	4	Bld	Tut	W	Shel		10.2	53.3	Ros	36x5	40x12	Jon		8050	170
Gramm-Pioneer 30	3275	Hink HA500	4¼x5½	28.9	L	C	Own	Fin	F	Strm	V	Hink	Own	DD	Eis	NE	Own	A	4	Own	Per	W	Shel	½Fl	7.7	36.7	Ros	36x4	36x4†	Smi	Fir	6640	150
International 61	2400	Own	4¼x5	28.9	H	T	Own	Fin	FS	Ens	G	Own	Own	DP	Spl	Own	Own	A	4	Own		I	Own	D	9		Own			Own		4500	138
Kimball AM	4850	Wis VAU	4½x6	32.4	L	C	Flex	PT	F	Zen	V	Sim	B-Li	DP	Spl	W	B-Li	A	4	Pet	US	W	Timk	Flot	8.75	46.8	Ros	36x5	40x7†	Smi	Fir	7850	Op
*Maccar H2		Cont L4	4½x5½	32.4	L	C	Own	Fin	F	Strm	G	Mue	B-Li	DD	Eis	Bos	B-Li	U	4	Spic	Mer	W	Timk	Flot	8.5	45.47	Ros	36x4	36x5†	Day	Fir	5700	162
Packard ED	4100	Own	4½x5½	32.4	L	C		Fin	F	Own	P	Own	Own	DP	Spl	Bj	Own	A	4	Spic		W	Own	Flot	9.0	41.3	Own	36x5	36x5			7350	156
Patriot Washington Spec	2900	Hin HA-200	4½x5½	32.4	L	C	Own	PT	F	Strm	V		Cont	DD	Spl		Cont	A	4	Ther	Mar	W	Wis	½Fl	9.67	45.93	Ros	36x4	36x7	Bim	Gdy	5200	156
Pittsburgher C	3600	Own	4½x5¼	27.2	T	C	GO	Fin	F	Strm	V		B-Li	DP	Bos		B-Li	U	4	Spic	IC	W	Own		9.5	50.82	Ros	36x5	36x8	Smi		6150	162
Rowe GPW3	5250	H-Sp8 VA	3¼x5	33.8	L	C	Fed	H	F	Zen	V		B-Li	DP	AtK	W	B-Li	U	4	Spic	Shel	W	Shel	½Fl	7.7	31	Ros	38x7*	42x9*	Hos		5500	170
Rowe GSW3	4150	Wis TAU	4 x6	25.6	L	G	Fed	H	F	Zen	G	Sim	B-Li	DP	Bos		B-Li	U	4	Spic	Shel	W	Shel	½Fl	7.7	31	Ros	36x5	36x5†	Hos		4800	162
Schacht	3800	Buda ETU	4¼x5½	28.9	L	G	Own	PT	F	Sheb	G	Dup	B.B.	D	Bos		Own	A	4	M-E	Nat	W	Own	Flot	9.66	46	Own	36x5	36x5†	StM		6700	156
Schwarts LS	3600	Buda HTU	4¼x5½	28.9	L	C	Fed	H	F	Strm	G	Mon	Full	DP	Bos		Full	U	4	M-E	Row	W	Shel	½Fl	8.75	42	Ros	36x4	36x8	Sch	Fir	4850	132
Schwarts L	3600	Buda HTU	4¼x5½	28.9	L	C	Fed	H	F	Strm	G	Mon	Full	DP	Bos		Full	U	4	M-E	Row	W	Shel	½Fl	8.75	42	Ros	36x4	36x8	Sch	Fir	4900	150
Schwarts LL	3600	Buda HTU	4¼x5½	28.9	L	C	Fed	H	F	Strm	G	Mon	Full	DP	Bos		Full	U	4	M-E	Row	W	Shel	½Fl	8.75	42	Ros	36x4	36x8	Sch	Fir	4970	168
*Stoughton F	3150	Her MU2	4¼x5½	29.0	L	C	Own	Fin	F	Strm	G	Dup	B-Li	DD	Eis		B-Li	U	4	Ther	Own	W	Shel	½Fl	8.75	35	Ros	36x5	36x5†	Roy	Gdy	5900	158
Traffic 6000	1895	Cont N4	3½x5	22.5	L	C	Own	C	FS	Cart	G		Covt	DP	Bos		Covt	U	3	Ther	Det	I	Russ	D	8.8	32.2	Own	36x4	36x7	Opt	Fir	3900	135
Transport 55	2385	Cont C2	4 1⅛x5¼	27.2	L	C			FS	Strm	G	Dup	Full	DP	Eis		Full		4	Hart	Det	I	Clark		8.15	39.19	Jac	36x4	36x8			5000	150
Traylor D	3300	Buda HTU	4¼x5½	28.9	L	P	GO	Fin	F	Zen	G	Pier	M-E	DD	Spl		Own		4	M-E	Mer	W	Shel	½Fl	7.7		Ros	36x4	36x8	Sch		5850	150

‡ Chassis only.

Trade Name and Model	Chassis Price	ENGINE DETAILS: Make and Model Number 4 Cylinder unless otherwise noted	Bore and Stroke	N.A.C.C. Horsepower	Valve Arrange't	How Cooled	Radiator (Make)	Radiator (Type)	Lubrication	Carburetor	Fuel Feed	Governor (Make)	Clutch (Make)	Clutch (Type)	Ignition System	Engine Starter	GEARSET: Make	Location	Speeds	Universal (Make)	Springs (Make)	REAR AXLE: Final Drive	Make	Type	Total Gear Reduction in High	Total Gear Reduction in Low	Steering Gear (Make)	TIRES, WHEELS, RIMS: *Pneumatic †Dual Front	Rear	Wheels (Make)	Rim Equipment	Chassis Weight (Stripped)	Wheelbase
		1		2	3	4	5	6	7	8	9	10	11	12	13	14	15		16	17	18	19	20			21			22	23		
3 Ton—Con'd																																	
Ultimate BL	3800	Buda HTU	4¼x5½	28.9	L	C	Own	PT	F	Strm	G	Pier	B-Li	DD	Eis	Bos	B-Li	U	4	Spic	Shel	W	Shel	½Fl	7.75	30.2	Ros	36x4	36x8	Jon	Fir	5590	178
U. S., R	.....	Own	4 x5¼	25.6	L	C	Lng	Fin	F	Strm	G	Own	B-Li	DD	Eis	Op	B-Li	A	4	Opt	Shel	W	Shel	½Fl	8.7	41.5	Lav	36x4	36x4†	Sch	.....	5500	156
Vim 23	3950	Her M2	4¼x5½	28.9	L	P	McC	Fin	F	Zen	G	Dup	B-Li	D	Spl	.....	B-Li	A	4	Spic	Shel	W	Shel	.....	7.75	.....	Gem	36x5	36x5†	Smi	.....	6370	175
Wichita RX	3200	Wau CU	4⅝x5¾	30.6	L	G	.....	PT	F	Strm	G	Wau	Own	C	Wag	.....	B-Li	A	4	Own	Det	W	Shel	½Fl	8.75	45.5	Ros	36x4	36x8	Smi	Fir	6900	160
Winther 51	.....	Wis TAU	4 x6	25.6	L	P	Brm	PT	F	Mas	V	.....	BB	DP	Eis	W	B-Li	A	4	Bld	Math	I	Clark	D	8	40	Ros	34x4	34x4	Own	.....	5300	150
*Wolverine K3	2910	Cont K	4½x5¼	27.2	L	G	Lng	Fin	F	Strm	G	Phar	Full	DD	Spl	AL	Full	U	4	UP	Am	I	Russ	D	9.4	45	Ros	36x4	36x8	Cla	Gdy	5600	168
3½ Ton																																	
Acason L	.....	Wau CU	4⅝x5¾	30.6	L	G	Can	C	FS	Sheb	V	Wau	Det	.....	Eis	.....	Cott	A	4	Bld	Det	W	Timk	Flot	8.75	48.5	Ros	36x5	36x5†	Smi	Opt	7000	180
Apex F	3975	Buda YTU	4½x6	32.4	L	C	GO	C	F	Strm	V	Dup	Full	D	Eis	Opt	Full	A	4	Bld	Det	I	Torb	D	10.5	.....	Woh	36x5	36x10	Roy	Fir	6940	168
Armleder KW	4150	Buda YTU	4½x6	32.4	L	P	Own	Fin	F	Zen	G	Phar	B-Li	DD	Bos	.....	B-Li	U	4	Spic	Math	W	Timk	Flot	10.33	55.25	Ros	36x5	36x5†	StM	.....	6900	156
Armleder K W	4150	Cont E4	4½x5½	32.4	L	P	Own	Fin	S	Zen	G	Phar	B-Li	DD	Bos	.....	B-Li	U	4	Spic	Math	W	Timk	Flot	10.33	55.25	Ros	36x5	36x5†	StM	.....	6900	156
Atterbury 7D-LWB	4075	Cont E4	4½x5½	32.4	L	C	Own	Fin	S	Zen	G	Mon	B-Li	DD	Ber	.....	B-Li	U	4	Spic	SP	W	Timk	Flot	10.3	49.85	Gem	36x5	40x5†	Arc	Fir	7270	192
Atterbury 7D-Standard	3975	Cont E4	4½x5½	32.4	L	C	Own	Fin	S	Zen	G	Mon	B-Li	DD	Ber	.....	B-Li	U	4	Spic	SP	W	Timk	Flot	10.3	49.85	Gem	36x5	40x5†	Arc	Fir	6950	167
Autocar Y	3950	Own Y	4¼x5½	28.9	L	C	Own	Fin	S	Strm	G	.....	Own	DP	..	.....	Own	A	4	.....	.....	R	Own	Flot	8.7	52.2	Ros	34x5	36x10	Hoo	.....	7000	120
Autocar B	4100	Own B	4¼x5½	28.9	L	C	Own	Fin	S	Strm	G	.....	Own	DP	..	.....	Own	A	4	.....	.....	R	Own	Flot	8.7	52.2	Ros	34x5	36x10	Hoo	.....	7150	156
Available H3½	4175	Her MU3	4½x5½	32.4	L	C	Chic	Fin	FS	Strm	V	Pier	B-Li	DD	Bos	.....	B-Li	A	4	M-E	Tut	W	Timk	Flot	10.33	49.99	Ros	36x5	40x5†	Sch	.....	6500	176
Bridgeport 4C	3990	Buda YTU	4½x6	32.4	L	G	Own	Fin	FS	Strm	G	Pier	B.B.	D	Eis	.....	B-Li	A	4	Hart	Per	W	Eat	.....	9.25	.....	Ros	36x5	36x10	Jon	Fir	10500	170
Brockway R-4	.....	Cont L4	4½x5½	32.4	L	C	Bus	Fin	F	Strm	V	Phar	B-Li	DD	Eis	.....	B-Li	A	4	Spic	Mer	W	Timk	Flot	8.75	46.8	Gem	36x5	36x5†	Smi	.....	6800	164
Chicago C3½	.....	Her MU3	4½x5½	32.4	L	C	Brm	PT	FS	Strm	G	Sim	B-Li	D	Bos	.....	B-Li	A	4	Pet	Math	W	Timk	Flot	9 33	50	Gem	36x5	36x10	Opt	Sta	7200	168
*Clydendale 90	4100	Cont	4½x5½	32.4	L	C	Own	PT	FS	Zen	G	Own	B-Li	DD	Bos	.....	B-Li	A	4	Spic	Stan	W	Timk	Flot	10 33	55.2	Ros	36x5	40x5†	Smi	.....	7000	170
Dart W	.....	Buda YTU	4½x6	32.4	L	C	Own	C	F	Zen	G	Pier	Full	DD	Eis	.....	Full	A	4	Spic	Per	W	Own	....	8.7	52.5	Ros	36x5	36x10	Pru	.....	6740	160
Day Elder F	3150	Cont E4	4½x5½	32.4	L	C	Bus	Fin	FS	Zen	G	Mon	B-Li	DD	Eis	.....	B-Li	U	4	Hart	IC	W	Shel	½Fl	10.25	41	Gem	36x5	36x5†	Jon	Fir	5600	165
Dependable G 3½	3550	Buda YTU	4½x6	32.4	L	C	Lng	Fin	F	Zen	V	Mon	Full	DD	Spl	AL	Full	A	4	Acm	Per	W	Wis	½-Fl	10	47.61	Ros	36x6	36x10	Bim	Fir	6000	165
Diamond T-K	3750	Hin	4¼x5½	28.9	L	C	GO	Fin	F	Strm	V	Own	Covt	DD	Bos	.....	Covt	A	4	Spic	Math	W	Timk	Flot	8.8	44.36	Gem	36x5	36x5†	.....	.....	7250	170
Dixon	4070	Cont E4	4½x5½	32.4	L	C	GO	PT	FS	Zen	G	Pier	Full	.....	Apo	.....	Full	U	4	Hart	IC	W	Timk	Flot	Opt	Opt	Ros	36x5	36x10	Smi	.....	6650	160
Dorris K7	4400	Own	4½x5½	28.9	H	C	McC	Fin	F	Strm	G	Own	Own	DP	Bos	W	W-Gr	A	4	Spic	Row	W	Timk	Flot	10.33	51.5	Ros	36x5	36x10	Smi	.....	6750	194
Duplex E	3500	Buda TU	4¼x5½	28.9	H	C	Lng	ZZT	FS	Sheb	V	Dup	B-Li	DD	Eis	.....	B-Li	U	4	Pet	Tut	I	Own	D	8	64	Woh	36x8	36x8	Pru	.....	6075	130
*Federal WE	3150	Cont E4	4½x5½	32.4	L	C	Own	Fin	FS	Zen	G	Phar	B.B.	DP	Eis	.....	WC	A	4	Spic	Math	W	Timk	Flot	10.33	51.56	Gem	36x5	36x5†	Smi	Fir	6990	156
Gary KT	3650	Buda YTU	4½x6	32.4	L	C	Chic	Fin	F	Mas	G	McC	B-Li	DD	Eis	.....	B-Li	A	4	Spic	Math	W	Timk	Flot	10.33	50	Ros	36x5	40x5	Pru	.....	7000	162
Giant 17	4150	Cont E4	4½x5½	32.4	L	P	Own	.....	B	Strm	G	Mon	.....	DD	Eis	.....	B-Li	A	4	Spic	Shel	W	Timk	Flot	10	.....	Gem	36x5	36x5†	Smi	.....	6800	176
G. M. C. K-71A	3600	Own	4½x6	32.4	L	B	Own	Fin	F	Mar	G	Own	Own	DD	Eis	Opt	Own	A	7	Own	Det	W	Timk	Flot	8.75	75.2	Own	36x5	40x5†	Own	.....	7714	163
G.M.C. K-71B	3700	Own	4½x6	32.4	L	B	Own	Fin	F	Mar	G	Own	Own	DD	Eis	Opt	Own	A	7	Own	Det	W	Timk	Flot	8.75	75.2	Own	36x5	40x5	Own	.....	7820	187
Gramm-Pioneer 75P	4225	Hink HA200	4½x5½	32.4	L	C	Own	Fin	F	Strm	V	Hink	Own	DD	Eis	NE	Own	A	4	Own	Per	W	Shel	½Fl	9.5	45	Ros	36x6*	42x9*	Smi	.....	6000	150
Hal-Fur B	3000	Hin HA-500	4¼x5½	28.9	L	C	GO	PT	f	Strm	V	Hin	B.B.	P	Bos	W	Own	A	4	Pet	Per	W	Timk	Flot	7.75	57.4	Gem	36x6	Opt	Smi	Fir	5000	Op
Hal-Fur F	4000	Hin AA 1600	4½x5½	32.4	H	C	GO	PT	F	Strm	V	Hin	B.B.	DP	Bos	W	Own	A	4	Pet	Mer	W	Timk	Flot	10.33	72	Gem	36x5	40x10	.....	.....	6500	180
Hall 3½ Worm	.....	Cont E4	4½x5½	32.4	L	C	Own	PT	FS	Zen	G	Dup	B-Li	DP	Bos	.....	B-Li	A	..	Opt	Det	W	Timk	Flot	10	.....	Gem	36x5	36x5†	Smi	.....	6525	144
Harvey WHA	3950	Buda YTU	4½x6	32.4	L	C	Own	Fin	F	Strm	G	McC	Full	DD	Eis	.....	B-Li	A	4	Spic	Shel	W	Shel	½Fl	8.75	46.8	Ros	36x5	36x5†	StM	.....	7600	160
Hendrickson M	3000	Buda ETU	4¼x5½	28.9	L	C	Chic	PT	F	Strm	G	McC	Full	DD	Spl	.....	Full	A	4	Ther	Tut	W	Timk	Flot	10	49.6	Ros	36x5	36x5..	Stn	.....	.....	Op
Hurlburt	.....	Buda YTU	4½x6	32.4	L	C	Own	.....	FS	Flch	G	Dup	B-Li	D	Eis	.....	B-Li	A	4	Spic	Per	W	Own	Flot	8.7	41.91	Ros	36x5	36x5	Way	.....	7400	156
Indiana 35	.....	Own 40	4¾x5½	30.6	L	C	McC	Fin	F	Strm	G	Own	Own	DD	Eis	.....	B-Li	A	4	Spic	Shel	W	Shel	½Fl	10.2	54.84	Woh	36x5	36x10	Smi	.....	7050	160
Jackson B	3850	Cont E4	4½x5½	32.4	L	P	Lng	Fin	FS	Strm	V	Pier	B.B.	DP	Eis	Dy	Own	A	4	Spic	Per	B	Own	Flot	9.2	43.49	Ros	36x7	36x7	.....	.....	7400	150
Kalamazoo SK	3845	Wis UAU	4¼x6	28.9	L	P	GO	PT	F	Strm	V	Pier	Full	D	Bos	Dy	Full	A	4	B.B.	Shel	W	Shel	½Fl	10.25	61.5	Ros	36x5	36x12	Smi	.....	7520	160
Kelly-Springfield K-40	3900	Own	4½x6½	32.4	T	C	Lng	Fin	F	Zen	G	Pier	B&B	D	Eis	W	Covt	A	3	Own	Per	C	Own	D	10.49	31.69	Gem	36x5	40x5†	StM	.....	7730	Op
Kelly-Springfield K-41	3900	Own	4½x6½	32.4	T	C	Lng	Fin	F	Zen	G	Pier	B.B.	D	Eis	W	Covt	A	4	Pet	Per	I	Clark	D	10	50.7	Gem	36x5	36x10	Cla	.....	7900	Op
Kelly-Springfield K-42	3900	Own	4½x6½	32.4	T	C	Lng	Fin	F	Zen	G	Pier	B.B.	D	Eis	W	Covt	A	4	Pet	Per	W	Eat	½Fl	10.25	51.97	Gem	36x5	40x5†	Smi	.....	8500	Op
Kleiber C	.....	Cont L4	4½x5½	32.4	L	C	RT	PT	FS	Strm	G	Sim	.....	DD	Bos	.....	B-Li	A	4	Spic	.....	W	Timk	Flot	8.75	42.35	Ros	36x5	36x10	Smi	.....	7200	163
*Koehler F	4470	Her	4½x5½	32.4	L	C	Own	PT	F	Zen	G	Pier	B-Li	DD	Spl	.....	B-Li	A	4	Spic	Math	W	Timk	Flot	10.33	.....	Lav	36x5	36x10	Day	.....	7000	162
Larrabee L4	4000	Cont L4	4½x5½	32.4	L	C	R-T	Fin	S	Zen	G	Phar	B-Li	DD	Bos	.....	B-Li	A	4	Spic	Mer	W	Shel	½Fl	10	53.5	Ros	36x5	36x5†	Smi	.....	7660	186
*Mack AC 3½	4950	Own AC	5 x6	40	L	C	Own	Fin	S	Zen	G	Own	Own	DP	Spl	.....	Own	UJ	3	Spic	Mer	C	Own	D	8.49	27.20	Own	36x5	40x5†	.....	.....	8070	Op
Master A	3990	Buda YTU	4½x6	32.4	L	C	Chic	PT	FS	Mas	V	Pier	B-Li	DP	Eis	.....	B-Li	A	4	Spic	Det	W	Timk	Flot	Opt	Opt	Ros	36x5	40x5†	Smi	.....	8000	158
Master AL	4090	Buda YTU	4½x6	32.4	L	C	Chic	PT	FS	Mas	V	Pier	B-Li	DP	Eis	.....	B-Li	A	4	Spic	Det	W	Timk	Flot	Opt	Opt	Ros	36x5	40x5†	Smi	.....	8200	194
Master E	4290	Buda YTU	4½x6	32.4	L	C	Chic	PT	FS	Mas	V	Pier	B-Li	DP	Eis	.....	B-Li	A	4	Spic	Det	R	Walk	Flot	Opt	Opt	Ros	36x5	40x5†	Wal	.....	8000	158
Master EL	4390	Buda YTU	4½x6	32.4	L	C	Chic	PT	FS	Mas	V	Pier	B-Li	DP	Eis	.....	B-Li	A	4	Spic	Det	R	Walk	Flot	Opt	Opt	Ros	36x5	40x5†	Wal	.....	8200	194
Menominee G	3800	Wis VAU	4½x6	32.4	L	C	Own	Fin	FS	Strm	G	Mon	Det	DP	Eis	Opt	Cott	A	4	Spic	Tut	W	Timk	Flot	10.3	53.71	Ros	36x5	36x10	Smi	Fir	6750	160
*Nelson & LeMoon G 4	.....	Cont L4	4½x5½	32.4	L	C	Chic	Fin	F	Strm	G	Phar	B-Li	DD	Bos	W	B-Li	U	4	Own	Tut	W	Timk	Flot	8.7	42	Ros	36x5	36x5†	Pru	Gdy	6000	Op
Noble E-71	3800	Buda YTU	4½x6	32.4	L	C	Chg	Fin	F	Strm	V	Pier	Full	DP	Eis	W	War	A	4	ME	.....	W	Shel	½Fl	8.75	44	Lav	36x53	6x10	Bim	Fir	7200	182
Northway B3	4200	Own	4 x6	25.6	H	C	GO	C	F	Strm	V	Pier	Full	DP	Wag	Bj	Full	U	4	Spic	Per	W	Shel	½Fl	10.25	49.2	Ros	36x5	40x5†	Cla	Fir	7700	Op
Ogden F 3½	.....	Cont L4	4½x5½	32.4	L	C	Chic	Fin	F	Strm	G	Pier	B-Li	DD	Spl	.....	B-Li	A	4	M-E	Tut	W	Timk	Flot	10.33	.....	Ros	36x5	40x10	Stn	.....	7300	178
*O.K. 3½ T	3975	Buda YTU	4½x6	32.4	L	G	RT	PT	FS	Zen	V	Pier	Full	DD	Eis	.....	Full	A	4	Hart	Cham	W	Wis	½Fl	10	60	Ros	36x5*	36x5†	Bim	.....	6350	164
Old Reliable C	4250	Wis UAU	4¼x6	28.9	L	C	Chic	PT	F	Strm	V	Mon	Full	DD	Bos	.....	Full	A	4	Pet	Shel	W	Shel	½Fl	8.75	52.5	Ros	36x5	36x5†	StM	.....	6650	168
Oneida D	4050	Hin 200	4½x5½	33.5	L	C	Mod	C	F	Strm	V	Hin	Full	DD	Apo	.....	Full	A	4	Pet	Math	W	Timk	Flot	10.33	49.6	Ros	36x5	36x10	Smi	.....	7700	170
Paige 51-18	3145	Hin HA 200	4½x5½	32.4	L	C	Own	Fin	F	Strm	V	Sim	B-Li	DD	Bos	.....	B-Li	A	4	Spic	Per	W	Timk	Flot	10.3	50.01	Ros	36x5	36x5†	Own	Fir	7000	160
Parker J20	3950	Wis VAU	4½x6	32.4	L	C	Own	PT	F	Strm	V	Pier	B-Li	DD	Eis	W	W-Gr	A	4	Bld	Tut	W	Own	Flot	8.75	43.6	Ros	36x5	40x5†	Smi	.....	6550	160
Pierce Arrow W2	4350	Own	4½x6¾	32.4	T	C	Own	Fin	F	Strm	F	Own	Own	DD	Del	Opt	Own	A	4	.....	SP	W	Own	Flot	8	49	....	36x5	36x5†	Day	.....	8350	162
Pittsburger D	3800	Own	4½x5½	27.2	T	C	GO	Fin	F	Strm	V	.....	B-Li	DP	Bos	.....	B-Li	U	4	Spic	C	W	Own	....	9.5	50.82	Ros	36x5	36x10	Smi	.....	6500	162
*Power C	4150	Hink HA200	4½x5½	32.4	L	G	GO	T	F	Zen	G	Hin	Full	DD	Eis	W	Full	A	4	Arv	Row	W	Wis	½Fl	10	48	Ros	36x5	40x10	StM	.....	7400	160
Rainier R-15	4400	Cont L4	4½x5½	32.4	L	C	G	EM	PT	FS	Zen	V	Pier	B-Li	DP	Eis	.....	B-Li	A	4	Spic	SP	W	Tim	Flot	....	49.25	Ros	36x5	36x5†	.....	Fir	....	170
Republic 20	3095	Cont E4	4½x5½	32.4	L	C	Own	Fin	FS	Strm	G	Phar	Full	DD	Bos	.....	Full	U	4	Spic	Math	I	Torb	D	10.25	49.25	Jac	36x5	36x10	Smi	Fir	6517	165
Gary KT	3550	Buda YTU	4½x6	32.4	L	C	Chic	Fin	F	Mas	G	McC	B-Li	DD	Eis	.....	B-Li	A	4	Spic	Math	W	Timk	Flot	10.33	50	Ros	36x5	40x5	Pru	.....	7000	162
Sanford W3b	.....	Cont E4	4½x5½	32.4	L	C	McC	Fin	F	Strm	G	Pier	B.B.	DP	Eis	.....	B-Li	A	4	Spic	Per	W	Shel	½Fl	8.7	34.8	Ros	36x5	36x5†	Hoo	Fir	6750	174
Selden Unit 70	3750	Cont E7	4½x5½	32.4	L	C	Lng	Fin	FS	Strm	G	Pier	B-Li	D	Eis	W	B-Li	A	4	Spic	Per	W	Timk	Flot	8.75	42.35	Gem	36x5	36x10	Stn	.....	7200	162
Selden Unit 51	4350	Cont E4	4½x5½	32.4	L	C	Lng	Fin	FS	Strm	G	Pier	B-Li	D	Eis	W	B-Li	A	4	Spic	Per	W	Timk	Flot	6	32	Gem	36x6	40x8	Stn	Opt	5650	179
Service 72	.....	Buda HU	4¼x5½	28.9	L	C	McC	Fin	F	Strm	V	.....	B.B.	DP	Eis	.....	B-Li	A	4	Spic	Shel	W	Timk	Flot	9.75	49.35	Ros	36x5	36x5†	Stn	.....	6950	171
*Service 77	.....	Buda YU	4¼x6	32.4	L	C	Lng	Fin	F	Strm	V	.....	B.B.	DP	Eis	.....	B-Li	A	4	Spic	Shel	W	Timk	Flot	9.75	49.35	Ros	36x5	36x5†	Stn	.....	7250	171

	2675	Cont E4	4½x5½	32.4	L	C	McC	Fin	FS	Strm	G	Pier	B-Li	DD	Eis	.....	B-Li	A	4	Spic	Det	W	Timk	Flot	12	58.08	Ros	36x5	40x10	StM	.....	7350	188
	.....	Cont E4	4½x5½	32.4	L	C	Own	Fin	FS	Strm	G	Pier	B-Li	DD	Eis	.....	B-Li	A	4	Spic	Det	W	Timk	Flot	12	58.08	Ros	36x5	40x10	StM	.....	7700	204
	.....	Cont E4	4½x5½	32.4	L	C	Own	Fin	F	Strm	G	Pier	B-Li	DD	Eis	.....	B-Li	A	4	Spic	Per	W	Timk	Flot	10.3	49.8	Gem	36x5	36x12	.....	.....	6480	160
	.....	Cont E4	4½x5½	32.4	L	C	Own	Fin	F	Strm	G	Pier	B-Li	DD	Eis	.....	B-Li	A	4	Spic	Per	W	Timk	Flot	10.3	49.8	Gem	36x5	36x12	.....	.....	8050	162

Signal M.	3675	Cont E4	4½x5½	32.4	L	C	McC	Fin	FS	Strm	G	Pier	B-Li	DD	Eis	.....	B-Li	A	4	Spic	Det	W	Timk	Flot	12	58.08	Ros	36x5	40x10	StM	.....	7350	168
Signal ML.	3775	Cont E-4	4½x5½	32.4	L	C	McC	Fin	FS	Strm	G	Pier	B-Li	DD	Eis	.....	B-Li	A	4	Spic	Det	W	Timk	Flot	12	58.08	Ros	36x5	40x10	StM	.....	7700	204
Standard 66.	3150	Cont E7	4½x5½	32.4	L	C	Lng	Fin	F	Strm	V	Mon	B-Li	DD	Eis	.....	B-Li	A	4	Spic	Per	W	Timk	Flot	10.3	49.8	Gem	36x5	36x12	.....	.....	6480	160
Sterling 3½.	4325	Ster DU	4½x6¼	32.4	L	C	Own	PT	F	Zen	V	Wau	H-S	WD	Eis	.....	Own	A	3	Spic	Math	W	Timk	Flot	8.75	39.5	Ros	36x5	40x5†	Pru	.....	8050	162
Stewart 10.	3190	Cont E7	4½x5½	32.4	L	G	Bus	PT	FS	Zen	G	Pier	Full	DP	Eis	.....	Full	U	4	Hart	Det	I	Clark	D	10	48	Ros	36x5†	36x5†	Cla	Fir	6080	165
Stewart 10X.	3190	Buda YTU	4½x6	32	L	G	Bus	P	FF	Zen	G	Pier	Full	DP	Eis	.....	Full	U	4	Hart	Det	I	Clark	D	10	48.01	Ross	36x5†	36x5†	Cla	Fir		165
*Super Truck 70.	4150	Wis	4¼x6	28.9	L	C	Chic	Fin	F	Zen	G	Sim	Full	DD	Bos	.....	Full	A	4	Spic	Shel	W	Shel	½Fl	10.25	49.2	Ros	36x5	40x5†	Smi	.....	7500	164
Tiffin F35.	3600	Cont L4	4½x5½	32.4	L	C	Own	Fin	FS	Strm	G	Pier	Det	DP	Bos	W	Full	A	4	Pet	Kal	W	Shel	½Fl	8.7	44.5	Ros	36x5	40x5†	Smi	.....	7800	160
Titan 3½.	.....	Buda YTU	4¼x5½	28.9	L	C	B&W	PT	F	Strm	G	Sim	B.B.	DP	Eis	.....	Cott	A	4	UP	Math	I	Own	D	9	48	Lav	36x5	40x10	Day	.....	6500	156
*Tower G3½.	3475	Cont E4	4½x5½	32.4	L	C	Own	PT	S	Zen	G	Pier	Full	DP	Eis	.....	Full	U	4	Spic	Det	W	Timk	Flot	10.33	50	Ros	36x5	36x5†	Pru	Gdy	7010	165
Transport 60	2585	Buda HTU	4½x5½	28.9	L	C	.....	.....	F	Strm	G	Dup	Full	DP	Eis	.....	Full	...	4	Hart	Det	I	Clark	.....	8.15	39.1	Jac	36x4	36x8	.....	.....	5400	150
Twin City 3½.	3950	Own	4¼x6	28.9	H	C	Spi	H	F	Sheb	V	Own	B.B.	D	Bos	.....	Full	A	4	Spic	Math	W	Timk	.....	10.33	49.58	Ros	36x5	40x5	Smi	.....	6800	168
United C 3½.	3975	Buda ETU	4¼x5½	28.9	L	C	Mod	H	F	Strm	G	Sim	Full	DD	Eis	Opt	Full	A	4	Spic	Shel	W	Shel	D	10.25	48.1	Lav	36x5	36x5†	Cla	.....	6700	157
Ursus W 60	3950	Buda YTU	4½x6	32.4	L	C	.....	PT	...	Strm	...	Pier	B-Li	DP	Spl	.....	B-Li	..	4	Ther	.....	W	Timk	Flot	.....	.....	Ros	Opt	Opt	Roy	.....	.....	Op
Walter T.	4550	Own DU	4½x6¼	32.4	L	C	Bus	PT	F	Strm	G	Wau	B-Li	D	Eis	W	War	A	4	Own	.....	.....	Own	Flot	8	40	Ros	36x5	40x5†	.....	.....	7800	168
Ward LaFrance 4A.	3990	.....	4½x6¼	32.4	L	C	Own	Fin	F	Strm	G	.....	B-Li	DP	Bos	.....	B-Li	A	4	M&E	Mer	W	Timk	Flot	7.8	41.73	Ros	36x5	36x5†	Smi	.....	7750	162
Watson N.	4250	Cont E4	4½x5½	32.4	L	P	R-T	PT	FS	Strm	G	Pier	B-Li	DP	Sim	.....	B-Li	A	4	Spic	Shel	W	Wis	½Fl	9	43.56	Gem	36x5	36x10	C&M	.....	6600	168
White 40.	4200	Own	3¾x5¾	22.5	L	C	.....	Fin	F	Own	V	Own	Own	D	.....	.....	Own	U	4	Own	.....	R	Own	Flot	.....	.....	Own	36x5	40x5†	.....	.....	7300	174
Wichita O.	3500	Wau DU	4½x6¼	32.4	L	G	.....	PT	F	Strm	G	Wau	Own	C	Wag	.....	B-Li	A	4	Own	Det	W	Shel	½Fl	11.75	61.10	Ros	36x5	36x5†	Smi	.....	6500	165
Wilcox E.	.....	Buda	4½x6	32.4	L	G	.....	PT	S	Strm	G	Dup	Own	C	Bos	.....	Own	A	4	Own	Shel	R	Walk	½Fl	10	45.1	Own	36x5	36x5†	.....	.....	6600	147
Wilson G.	3685	Own	4¼x5½	28.9	L	G	Lng	PT	FS	Mar	V	Pier	B.B.	D	Eis	.....	Own	A	4	K-B	Per	W	Timk	Flot	8.7	42.3	Ros	36x5	36x5†	Smi	.....	6800	160
*Winther 70.	.....	Wis TAU	4¼x6	25.6	L	G	Brm	PT	F	Mas	V	.....	B.B.	DP	Eis	W	B-Li	A	4	Bld	Math	I	Clark	D	9	36	Ros	36x5	36x5†	Cla	Fir	6400	150
Wisconsin D (Sauk City)	3000	Wau CU	4⅜x5¾	30.6	L	C	Chic	PT	F	Strm	V	Wau	B-Li	DD	Eis	Opt	B-Li	A	4	Spic	Det	W	Timk	Flot	9.25	.....	Lav	36x6	40x8	Bim	Gdy	6800	142
4 Ton																																	
Acme 90.	.....	ContL4	4½x5½	32.4	L	C	GO	Fin	F	Rayf	V	Dup	B.B.	DP	Eis	DL	Cott	A	4	Bld	Det	W	Timk	Flot	10.3	53.73	Ros	36x5	40x5†	Bim	.....	6980	168
*American.	4275	Wis	4½x6	32.4	L	G	GO	Fin	F	Strm	G	Own	Det	DP	Apo	.....	Cott	A	4	Acm	SP	W	Thom	Flot	10	.....	Lav	36x5	36x5†	Smi	.....	7000	158
Bessemer K2	.....	Cont E7	4½x5½	32.4	L	C	.....	C	FS	Strm	G	Pier	B.B.	DP	Eis	.....	B-Li	A	4	Spic	Per	I	Torb	D	10	49.5	Ros	36x5	36x10	Sch	Fir	7250	175
Corbitt A-22.	3800	Cont E4	4½x5½	32.4	L	C	McC	Fin	FS	Strm	V	Pier	B-Li	DD	Eis	.....	B-Li	U	4	Hart	Shel	W	Shel	½Fl	11.75	47	Ros	36x5	36x10	Smi	.....	7370	178
Denby 27.	3895	Cont E7	4½x5½	32.4	L	C	Lng	PT	FS	Strm	G	Sim	Full	DD	Eis	.....	W-Gr	A	4	UP	Det	I	Clark	D	10	49.9	Ros	36x5	36x5†	Smi	Fir	7020	170
Double-Drive B.	4000	Buda ETU	4¼x5½	28.9	L	G	.....	PT	F	Zen	V	Pier	B.B.	DD	Spl	Opt	Own	A	4	Own	Own	W	Own	½Fl	9.75	48.75	Lav	36x6	36x6	Stn	.....	.....	130
Fageol 3½-4.	5000	Wau DU	4½x6¼	32.4	L	C	Mod	C	F	Zen	V	Wau	Det	DD	Spl	.....	Own	A	5	Spic	Math	W	Timk	Flot	7.4	79	Ros	36x5	40x5	Stn	.....	7300	172
Garford 77D.	3750	Buda YTU	4½x6	32.4	L	C	Own	Fin	F	Strm	G	Sim	.....	DD	Spl	.....	Own	A	4	Spic	Per	W	Timk	Flot	8.7	.....	Ros	36x5	36x5†	Smi	.....	7700	162
Gramm-Pioneer 40.	3995	Hink HA200	4½x5½	32.4	L	C	Own	Fin	F	Strm	V	Hink	Own	DD	Eis	NE	Own	A	4	Own	Per	W	Shel	½Fl	8.7	50.6	Ros	36x5	36x5†	Smi	.....	7980	156
Kimball AE.	5000	Wis RAU	4¾x6	36.1	L	C	Flex	PT	F	Zen	V	Sim	B-Li	DP	Spl	W	B-Li	A	4	Pet	US	W	Timk	Flot	8.75	46.8	Ros	36x5	40x7†	Smi	Fir	7800	Op
Kissel Heavy Duty.	3675	Own 14000	4¼x5½	28.9	L	C	McC	PT	S	Strm	V	Pier	W-Gr	DP	Eis	.....	W-Gr	A	4	Spic	Shel	W	Shel	½Fl	11.7	58.6	Ros	36x5	36x5†	Smi	.....	7200	168
*Maccar M3.	.....	Cont L4	4½x5½	32.4	L	C	Own	Fin	F	Strm	G	Mue	B-Li	DD	Eis	Bos	B-Li	U	4	Spic	Mer	W	Timk	Flot	8.75	46.81	Ros	36x5	36x6†	Day	Fir	6975	174
*Master Y.	4490	Buda YTU	4½x6	32.4	L	C	Chic	PT	FS	Mas	V	Pier	B-Li	DP	Eis	.....	B-Li	A	4	Spic	Det	R	Walk	Flot	Opt	Opt	Ros	36x5	40.12	Walk	.....	8000	179
*Master YL.	4590	Buda YTU	4½x6	32.4	L	C	Chic	PT	FS	Mas	V	Pier	B-Li	DP	Eis	.....	B-Li	A	4	Spic	Det	R	Walk	Flot	Opt	Opt	Ros	36x5	40x12	Walk	.....	8000	194
Moreland RX.	4600	Cont B2	4¾x6	36.1	L	C	Own	C	F	Mas	P	Con	Own	DD	Spl	.....	Own	A	5	Ther	US	W	Timk	Flot	8.75	52.68	Ros	35x6	40x6	Smi	.....	8010	168
Rowe HW 4.	4500	Wis UAU	4¼x6	28.9	L	C	Fed	H	F	Zen	G	Sim	B-Li	DP	Bos	.....	B-Li	U	4	Spic	Shel	W	Shel	½Fl	8.7	35	Ros	36x5	36x6†	Hoo	.....	6370	156
Schacht.	4200	Buda YTU	4½x6	32.4	L	G	Own	PT	F	Sheb	G	Dup	B.B.	D	Bos	.....	Own	A	4	M&E	Nat	W	Own	Flot	10.5	50	Own	36x5	40x10†	StM	.....	7800	168
Union H.	3975	Wis VAU	4½x6	32.4	L	G	GO	Fin	F	Sheb	G	Dup	Full	DD	Eis	LN	Full	U	4	UP	Math	I	Torb	D	10.25	49.2	Ros	36x6	36x10	Smi	.....	7700	174
Union HW.	4650	Wis VAU	4½x6	32.4	L	G	GO	Fin	F	Sheb	G	Dup	Full	DD	Eis	LN	Full	A	4	UP	Math	R	Walk	.....	10.5	63.0	Ros	36x6	40x12	Smi	.....	7750	174
U.S., S.	.....	Own	4½x5½	32.4	L	C	Lng	Fin	F	Strm	V	Own	B-Li	DD	Eis	Opt	B-Li	A	4	Opt	Shel	W	Shel	½Fl	10.25	49.6	Lav	36x5	36x5†	Sch	.....	7600	168
5 Ton																																	
Acason M.	.....	Wau EU	5 x6¼	40	L	G	Can	Fin	FS	Sheb	V	Wau	Det	.....	Eis	.....	Cott	A	4	Bld	Det	W	Timk	Flot	10.25	53.3	Ros	36x6	40x6†	Smi	Opt	8970	187
Acme 125.	.....	Cont B2	4¾x6	36.1	L	C	GO	Fin	F	Rayf	V	Con	B.B.	DP	Eis	DL	Cott	A	4	Bld	Det	W	Timk	Flot	11.66	60.66	Ros	36x6	40x6†	Smi	.....	8976	180
Atterbury 8E.	4975	Cont B2	4¾x6	36.1	L	C	Own	Fin	F	Zen	V	Con	B-Li	DD	Ber	.....	B-Li	A	4	Spic	SP	W	Timk	Flot	11.6	62.38	Gem	36x5	40x6†	Stn	.....	9496	167
Atterbury 8E-LWB.	5125	Cont B-2	4¾x6	36.1	L	C	Own	Fin	F	Zen	V	Con	B-Li	DD	Ber	.....	B-Li	A	4	Spi	SP	W	Timk	Flot	11.6	62.38	Gem	36x5	40x6†	Stn	.....	9816	192
Autocar Y.	3950	Own Y	4¼x5½	28.9	L	C	Own	Fin	S	Strm	G	.....	Own	DP	.....	.....	Own	A	4	.....	.....	R	Own	Flot	8.7	52.2	Ros	34x6	36x12	Hoo	.....	7200	120
Autocar B.	4100	Own B	4¼x5½	28.9	L	C	Own	Fin	S	Strm	G	.....	Own	DP	.....	.....	Own	A	4	.....	.....	R	Own	Flot	8.7	52.2	Ros	34x6	36x12	Hoo	.....	7400	156
Available H5.	5375	Her T2	5 x6	40	L	C	Chic	Fin	FS	Strm	V	Pier	B-Li	DD	Bos	.....	B-Li	A	4	M-E	Tut	W	Timk	Flot	11.3	60.45	Ros	36x6	40x12	Smi	.....	9500	190
Brockway T.	.....	Cont B5	4¾x6	36.1	L	C	Bus	Fin	F	Strm	V	Phar	B-Li	DD	Eis	.....	B-Li	A	4	Spic	Mer	W	Timk	Flot	10.25	54.8	Gem	36x6	40x6†	Smi	.....	8800	174
Chicago D5	.....	Her MU3	4½x5½	32.4	L	C	Brm	PT	F	Strm	G	Sim	B-Li	D	Bos	.....	B-Li	A	4	Pet	Math	W	Timk	Flot	11.66	63.1	Gem	36x6	40x6†	Opt	Sta	8500	168
*Clydesdale 120 B.	4500	Cont	4¾x6	36.1	L	C	Own	PT	F	Strm	V	Own	B-Li	DD	Bos	.....	B-Li	A	4	Spic	Stan	W	Timk	Flot	11.66	62.4	Ros	36x6	40x12	Smi	.....	8700	176
Corbitt AA-22.	4500	Cont B2	4¾x6	36.1	L	C	McC	Fin	F	Strm	V	Con	B-Li	DD	Eis	.....	B-Li	A	4	Hart	Shel	W	Shel	½Fl	10.25	49.6	Ros	36x6	40x6†	Smi	.....	9685	178
Day-Elder E.	4250	Buda YU	4½x6	32.4	L	C	Bus	Fin	F	Zen	G	Mon	B-Li	DD	Eis	.....	B-Li	A	4	Hart	Shel	W	Shel	½Fl	10.25	49.61	Gem	36x5	40x6†	Smi	Fir	8400	170
Denby 210	4295	Cont E7	4½x5½	32.4	L	C	Lng	PT	FS	Strm	G	Sim	Full	DD	Eis	.....	W-Gr	A	4	Pet	Det	I	Clark	D	12.5	62.7	Ros	36x6	40x6†	Cla	Fir	8590	170
Diamond T-EL.	4325	Hin	4½x5½	32.4	L	C	GO	Fin	F	Strm	V	Own	Covt	DD	Bos	.....	Covt	A	4	Spic	Math	W	Timk	Flot	11.66	59.11	Gem	36x6	40x6†	.....	.....	8625	180
Diamond T S.	4500	.....	4¾x6	36.1	L	C	GO	Fin	F	Strm	V	Own	B-Li	DD	Bos	.....	B-Li	A	4	Spic	Math	W	Timk	Flot	11.66	56.43	Gem	36x6	40x6†	.....	.....	8750	180
Dixon.	4490	Cont E4	4½x5½	32.4	L	C	GO	PT	FS	Zen	G	Pier	Full	.....	Apo	.....	Full	U	4	Hart	IC	W	Timk	Flot	Opt	Opt	Ros	36x5	36x12	Smi	.....	7100	160
D-Olt B-5.	4850	Midwest	4½x6	32.4	H	P	G-O	Fin	F	Zen	V	Sim	B-Li	DD	Bos	.....	B-Li	A	4	Spic	SP	W	Timk	.....	11.23	.....	Ros	36x6	40x12	.....	.....	8600	168
Fageol 5-6.	5700	Wau DU	4½x6¼	32.4	L	C	Mod	C	F	Zen	V	Wau	Det	DD	Spl	.....	Own	A	5	Spic	Math	W	Timk	Flot	8.4	89	Ros	36x6	40x6†	Stn	.....	8300	172
*Federal X2.	4500	Con B5	4¾x6	36.1	L	C	Own	Fin	F	Zen	V	Phar	B.B.	DP	Eis	.....	UC	A	4	Spic	Math	W	Timk	Flot	10.25	60	Gem	36x6	40x6†	.....	Fir	8800	163
Garford 68 D.	4500	Buda BTU	5 x6½	40	L	C	Own	Fin	F	Strm	G	Sim	.....	DD	Spl	.....	Own	A	4	Spic	Per	W	Timk	Flot	8.8	.....	Ros	36x6	40x6†	Smi	.....	9350	162
Gary M.	4100	Buda BTU	5 x6½	40	L	C	Chic	Fin	F	Mas	G	McC	B-Li	DD	Eis	.....	B-Li	A	4	Spic	Math	W	Timk	Flot	11.66	56.4	Ros	36x6	40x6	Day	.....	8500	182
Giant 18.	5000	Cont	4½x5½	32.4	L	P	Own	.....	B	Sheb	G	Mon	B-Li	DD	Eis	.....	B-Li	A	4	Spic	Math	W	Timk	Flot	10.25	49.61	Ros	36x6	40x10	Smi	.....	7500	196
G. M. C. K-101 A.	3950	Own	4½x6	32.4	L	B	Own	Fin	F	Mar	G	Own	Own	DD	Eis	Opt	Own	A	7	Own	Det	W	Timk	Flot	10	86	Own	36x5	40x6†	Own	.....	8535	163
G.M.C. 101B.	4050	Own	4½x6	32.4	L	B	Own	Fin	F	Mar	G	Own	Own	DD	Eis	Opt	Own	A	7	Own	Det	W	Timk	Flot	10	86	Own	36x5	40x6	Own	.....	8645	187
Gramm-Pioneer 50-60	4895	Lib B	4¾x6	36.1	L	C	Own	Fin	F	Strm	V	Con	Own	DD	Eis	NE	Own	A	4	Own	Per	W	Shel	½Fl	9.5	55	Ros	36x6	40x6†	Smi	.....	9700	168
Hall 5 Worm	.....	Cont E4	4½x5½	32.4	L	T	Own	PT	FS	Zen	G	Dup	B-Li	DP	Bos	.....	B-Li	A	..	Opt	Per	W	Timk	Flot	12	.....	Gem	36x5	40x6†	Smi	.....	8100	144
Hendrickson K.	4000	Wau EU	5 x6¼	40	L	C	Chic	Pt	F	Strm	G	Wau	Full	D	Spl	.....	Full	...	4	Ther	Tut	W	Timk	Flot	12	57	Ros	36x6	40x6†	Stn	.....	.....	Op
Hurlburt.	.....	Buda YTU	4½x6	32.4	L	C	Own	.....	FS	Flch	G	Dup	B-Li	D	Eis	.....	B-Li	A	4	Spic	Per	W	Own	Flot	11	49.9	Ros	36x5	40x6†	Wau	.....	7973	156
*Indiana 51.	.....	Wau EU	5 x6¼	40	L	C	McC	Fin	F	Strm	G	Wau	B.B.	DP	Eis	.....	B-Li	A	4	Spic	Shel	W	Shel	½Fl	10.25	54.84	Woh	36x5	40x12	Smi	.....	9000	170
International 101.	3600	Own	4¼x5	28.9	H	T	Own	Fin	FS	Ens	G	Own	Own	DP	Spl	Own	Own	A	4	Own	.....	I	Own	D	11	53.25	Own	.....	.....	Own	.....	6715	160
Kalamazoo OK.	4350	Wis VAU	4½x6	32.4	L	P	GO	PT	F	Strm	V	Pier	Full	D	Bos	Dy	Full	A	4	B.B.	Shel	W	Shel	½Fl	13	78	Ros	36x6	40x6*	Smi	.....	8470	160
Kelly-Springfield K50.	4400	Own	4½x6½	32.4	T	C	Lng	Fin	F	Zen	G	Pier	B.B.	D	Eis	W	Covt	A	4	Own	Per	C	Own	D	12.24	42.57	Gem	36x6	40x6†	Smi	.....	8400	Op
Kimball AF.	5500	Wis RBU	5 x6	40	L	C	Flex	PT	F	Zen	V	Sim	B-Li	DP	Spl	W	B-Li	A	4	Pet	US	W	Timk	Flot	8.75	46.8	Ros	36x6	40x7†	Smi	Fir	8800	Op
Kissel Goliath.	4085	Own 60000	4½x5½	28.9	L	C	McC	PT	S	Strm	V	Pier	W-Gr	DP	Eis	.....	W-Gr	A	4	Spic	Shel	W	Shel	½Fl	13	65	Ros	36x6	36x6†	Smi	.....	8000	180
Kleiber D.	.....	Buda BTU	5 x6½	40	L	C	RT	PT	...	Strm	G	Sim	.....	DD	Bos	.....	B-Li	A	4	Spic	.....	W	Timk	Flot	11.66	56.48	Ros	36x6	40x6	Smi	.....	9200	180
Larrabee W.	4800	Cont B2	4¾x6	36.1	L	C	Bus	Fin	F	Sheb	G	Sim	B-Li	DD	Bos	...	B-Li	A	4	Opt	Mer	W	Shel	½Fl	10	51	Ros	36x6	40x6†	Smi	.....	9900	186
*Maccar G.	.....	Cont B2	4¾x6	36.1	L	C	Own	Fin	F	Zen	G	Con	B-Li	DD	Eis	Bos	B-Li	A	4	Spic	Mer	W	Timk	Flot	10.2	54.57	Ros	36x6	40x6†	Smi	Fir	9000	186
*Mack AC5	5500	Own AC	5 x6	40	L	C	Own	Fin	S	Zen	G	Own	Own	DP	Spl	.....	Own	UJ	3	Spic	Mer	C	Own	D	9	28.89	Own	36x6	40x6†	.....	.....	8650	Op
Master B.	4990	Buda ATU	4¾x6½	36.1	L	C	Chic	PT	FS	Mas	V	Pier	B-Li	DP	Eis	.....	B-Li	A	4	Spic	Det	W	Timk	Flot	Opt	Opt	Ros	36x6	40x6†	Smi	.....	9200	170
Master BL.	5090	Buda ATU	4¾x6½	36.1	L	C	Chic	PT	FS	Mas	V	Pier	B-Li	DP	Eis	.....	B-Li	A	4	Spic	Det	W	Timk	Flot	Opt	Opt	Ros	36x6	40x6†	Smi	.....	9800	194

Truck Name and Model	Chassis Price	ENGINE DETAILS: Make and Model Number 4 Cylinder unless otherwise noted	Bore and Stroke	N. A. C. C. Horsepower	Valve Arrange't	How Cooled	Radiator (Make)	Radiator (Type)	Lubrication	Carburetor	Fuel Feed	Governor (Make)	Clutch (Make)	Clutch (Type)	Ignition System	Engine Starter	GEARSET: Make	Location	Speeds	Universal (Make)	Springs (Make)	REAR AXLE: Final Drive	Make	Type	Total Gear Reduction in High	Total Gear Reduction in Low	Steering Gear (Make)	TIRES, WHEELS, RIMS: *Pneumatic †Dual Front	Rear	Wheels (Make)	Rim Equipment	Chassis Weight (Stripped)	Wheelbase
		1			2	3	4	5	6	7	8	9	10	11	12	13	14	15		16	17	18	19	20			21			22	23		
5 Ton—Con'd																																	
Master F	5090	Buda ATU	4¼x6½	36.1	L	C	Chic	PT	FS	Mas	V	Pier	B-Li	DP	Eis	.....	B-Li	A	4	Spic	Det	R	Walk	Flot	Opt	Opt	Ros	36x6	40x6†	Wal	.....	9200	170
*Master FL	5190	Buda ATU	4¼x6½	36.1	L	C	Chic	PT	FS	Mas	V	Pier	B-Li	DP	Eis	.....	B-Li	A	4	Spic	Det	R	Walk	Flot	Opt	Opt	Ros	36x6	40x6†	Wal	.....	9800	194
Menominee J	4850	Wis RAU	4¾x6	36.1	L	C	Own	Fin	FS	Strm	G	Mon	Det	DP	Eis	Opt	Cott	A	4	Spic	Tut	W	Timk	Flot	11.6	61.43	Ros	36x6	40x12	Smi	Fir	8250	160
*Nelson & LeMoon G5	.....	Cont B2	4¾x6	36.1	L	C	Chic	Fin	F	Strm	G	Con	B-Li	DD	Bos	W	B-Li	A	4	Own	Tut	W	Timk	Flot	11.66	.....	Ros	36x6	40x6†	Pru	.....	8000	Op
Ogden G 5	.....	Cont B 2	4¾x6	36.1	L	P	Chic	Fin	F	Strm	G	Con	B-Li	DD	Spl	.....	B-Li	A	4	M-E	Tut	W	Walk	.....	10.33	.....	Ros	36x6	40x12	Wal	.....	8600	175
Old Reliable D	5000	Wis RAU	4¾x6	36.1	L	C	Chic	PT	F	Strm	V	Mon	Own	WD	Bos	.....	B-Li	A	4	Pet	Shel	W	Shel	½Fl	10.25	54.8	Ros	36x6	40x6	StM	.....	8400	180
Oneida E	4725	Hin 1600	4½x5½	33.5	H	C	Mod	C	F	Strm	V	Hin	Full	DD	Apo	.....	Full	A	4	Pet	Math	W	Timk	Flot	11.66	70	Ros	36x6	40x12	Smi	.....	9400	180
Packard EF	4500	Own	5 x5½	40		L	C	.....	Fin	F	Own	P	Own	Own	DP	Spl	Bj	Own	A	4	Spic	.....	W	Own	Flot	10.66	49	Ros	36x6	40x6	.....	.....	9050	156
Parker M20	4850	Wis RBU	5 x6	40		L	C	Own	PT	F	Strm	V	Sim	B-Li	DD	Del	W-Gr	A	4	Bld	Tut	W	Own	Flot	10.25	51.1	Ros	36x6	40x6†	Smi	.....	8400	160
Pierce Arrow R10	4850	Own	4½x6¾	32.4	T	L	C	Own	Fin	F	Strm	F	Own	Own	DD	Opt	Own	A	4	.....	SP	W	Own	Flot	10	61.2	.....	36x5	40x6†	Day	.....	9300	168
Rainier R-17	5100	Cont B-2	4¾x6	36.1	L	G	C	EM	Fin	F	Zen	V	Pier	B-Li	DP	.....	.....	B-Li	A	4	SP	W	Timk	Flot	.....	.....	Ros	36x6	36x36†	Smi	.....	8000	170
Rowe FW5	4850	Wis VAU	4½x6	32.4	L	G	C	Fed	H	F	Zen	G	Sim	B-Li	DP	Bos	.....	B-Li	A	4	Spic	Shel	W	Shel	½Fl	8.7	40.7	Ros	36x6	40x6†	Hoo	.....	8300	169
Sanford W50	.....	Cont E4	4½x5½	32.4	L	G	C	McC	Fin	F	Strm	G	Pier	B.B.	DP	Eis	.....	B-Li	A	4	Spic	Per	W	Shel	½Fl	10.75	52.03	Ros	36x5	40x6†	Hoo	Fir	9070	174
Schacht	4400	Buda YTU	4½x6	32.4	L	G	C	Own	PT	F	Sheb	G	Dup	B.B.	D	Bos	.....	Own	A	4	M-E	Nat	W	Own	Flot	14	66.5	Own	36x5	40x6†	StM	.....	8200	168
Schwarts MS	4900	Buda YTU	4½x6	32.4	L	C	C	Fed	H	F	Strm	G	Sim	Full	DP	Bos	.....	Full	A	4	ME	Row	W	Shel	½Fl	10.25	61.5	Ros	36x6	40x12	Smi	Fir	8285	156
Schwarts M	4900	BudaYTU	4½x6	32.4	L	C	C	Fed	H	F	Strm	G	Sim	Full	DP	Bos	.....	Full	A	4	ME	Row	W	Shel	½Fl	10.25	61.5	Ros	36x6	40x12	Smi	Fir	8365	170
Schwarts ML	4900	Buda YTU	4½x6	32.4	L	C	C	Fed	H	F	Strm	G	Sim	Full	DP	Bos	.....	Full	A	4	ME	Row	W	Shel	½Fl	10.25	61.5	Ros	36x6	40x12	Smi	Fir	8460	186
Selden Unit 90	4950	Cont B2	4¾x6	36.1	L	C	C	Lng	Fin	F	Strm	G	Con	Det	D	Eis	.....	B-Li	A	4	Spic	SP	W	Timk	Flot	10.25	55	Gem	36x6	40x12	Stn	Opt	9650	164
*Service 102	.....	Buda YU	4½x6	32.4	L	C	C	Lng	Fin	F	Strm	V	.....	.....	DP	Eis	.....	B-Li	A	4	Spic	Shel	W	Timk	Flot	.....	.....	Ros	36x6	40x6†	Stn	.....	8760	171
Signal R	4400	Cont B2	4¾x6	36.1	L	C	C	McC	Fin	FS	Strm	G	Con	B-Li	DD	Eis	.....	B-Li	A	4	Spic	Det	W	Timk	Flot	11.6	56.43	Ros	36x6	40x12	Smi	Gdy	9510	180
Standard 5K	4400	Cont B2	4¾x6	36.1	L	C	C	Lng	Fin	F	Strm	V	Con	B-Li	DD	Eis	.....	B-Li	A	4	Spic	Per	W	Timk	Flot	11.66	56.5	Gem	36x6	40x14	Day	.....	8700	164
Sterling 5-Worm	4950	Ster EU	5 x6¼	40		L	C	Own	PT	F	Zen	V	Wau	H-S	WD	Eis	.....	Own	A	3	Spic	Math	W	Timk	Flot	8.8	39.69	Ros	36x6	40x6†	Pru	.....	9450	168
Sterling 5-Chain	5500	Ster EU	5 x6¼	40		L	C	Own	PT	F	Zen	V	Wau	H-S	WD	Eis	.....	Own	A	6	UM	Math	C	Own	D	7.04	43	Ros	36x6	40x6†	Smi	.....	9950	174
Super Truck 100	4600	Wis	4¾x6	36.1	L	C	C	Chic	Fin	F	Zen	G	Sim	Full	DD	Spl	.....	Full	A	4	Spic	Shel	W	Shel	½Fl	10.25	49.2	Ros	36x5	40x6†	Smi	.....	8500	164
Tiffin TW	4300	Cont B2	4¾x6	36.1	L	C	C	Own	Fin	F	Sheb	G	Con	B.B.	DP	Bos	W	Cott	A	4	Pet	Kal	W	Shel	½Fl	10.25	53.3	Ros	36x6	40x6†	Smi	.....	8550	168
Titan 5	.....	Buda YTU	4½x6	32.4	L	C	C	B&W	PT	F	Strm	G	Sim	B.B	D	Eis	.....	Cott	A	4	Pet	Shel	I	Clark	D	11	59	Lav	36x5	40x12	Cla	.....	7900	156
Titan 6	5250	Buda YTU	4½x6	32.4	L	C	C	BW	ZZT	F	Strm	G	Eis	B.B.	DD	Eis	.....	Cott	A	4	Pet	Shel	I	Clark	D	11	59	Lav	36x5	40x6†	Cla	.....	9100	156
Transport 75	3485	Buda YTU	4½x6	32.5	L	C	C	.....	.....	F	Strm	G	Dup	B.B.	.....	Eis	.....	Cott	...	4	Hart	Det	I	Clark	.....	10.1	52.1	Jac	36x5	36x12	.....	.....	7600	170
Traylor F	4700	Buda YTU	4½x6	32.6	L	C	P	GO	Fin	F	Zen	G	Sim	B-Li	DD	Bos	.....	B-Li	A	4	Spic	Mer	W	Shel	½Fl	10.2	.....	Ros	36x6	40x6†	Smi	.....	9000	170
Ultimate D	5500	Buda BTU	5 x6½	40		L	C	Own	PT	F	Strm	G	Pier	B-Li	DD	Eis	Bos	B-Li	A	4	Spic	Shel	W	Shel	½Fl	8.79	46.8	Ros	36x6	40x14	Smi	.....	8600	180
United V 5	5000	Buda YTU	4½x6	32.4	L	C	C	Mod	H	F	Strm	G	Sim	Full	DD	Eis	Opt	Full	A	4	Spic	Shel	I	Shel	D	12.5	75.36	Ros	36x5	40x6†	Cla	.....	9150	160
U. S., T	.....	Buda ATU	4¾x6½	36.1	L	C	C	Lng	Fin	F	Strm	V	Sim	B-Li	DD	Eis	Opt	B-Li	A	4	Opt	Shel	W	Shel	½Fl	10.25	54.8	Lav	36x6	40x6†	Smi	.....	9700	172
Walter S	4850	Own DU	4½x6¼	32.4	L	C	C	Bus	PT	F	Strm	G	Wau	B-Li	DP	Bos	W	W-Gr	A	4	Own	Stan	R	Own	Flot	10	45	Ros	36x6	40x6†	Day	.....	8200	168
Ward La France 5A	4590	.....	5 x6¼	40		L	C	Own	Fin	F	Strm	G	.....	B-Li	DP	Bos	.....	B-Li	A	4	M-E	Mer	W	Timk	Flot	8.8	47.08	Ros	36x6	40x6†	Smi	.....	9300	164
White 45	4500	Own	4¼x5½	28.9	L	C	C	.....	Fin	F	Own	V	Own	Own	D	...	.....	Own	U	4	Own	.....	R	Own	Flot	.....	.....	Own	36x6	40x6†	.....	.....	8100	174
Wilcox F	.....	Buda	4¾x6½	36.1	L	C	C	.....	PT	S	Strm	V	Dup	Own	C	Bos	.....	Own	A	4	Spic	Shel	R	Walk	½Fl	10.25	56.58	Own	36.5	40x12	Smi	.....	9000	162
Wilson H	4520	Own	4¾x6	36.1	L	G	C	Lng	PT	FS	Mar	V	Pier	B.B.	D	Eis	W	Own	A	4	K-B	Per	W	Timk	Flot	10.25	49.6	Ros	36x6	36x6†	Smi	.....	7500	160
Winther 109	.....	Wis VAU	4½x6	32.4	L	G	C	Brm	PT	F	Mas	V	Dup	B.B.	DP	Eis	W	B-Li	A	4	Pet	Math	I	Clark	D	12	60.5	Ros	36x5	40x6†	Cla	.....	8300	162
Wisconsin E	3500	Wau DU	4½x6¼	32.4	L	G	C	Chic	PT	F	Strm	V	Wau	B-Li	DD	Eis	Opt	B-Li	A	3	Spic	Det	W	Timk	Flot	9.25	.....	Lav	35x5	36x10	.....	Gdy	7000	148
*Wolverine L 5	3690	Cont L	4½x5½	32.4	L	G	G	Lng	Fin	F	Strm	G	Phar	Full	DD	Spl	AL	Full	U	4	Up	Am	I	Clark	D	10	48	Ros	36x6*	36x10	Cla	Gdy	7300	186
5½, 6 and 7 Ton																																	
Available H7	6000	Her T3	5 x6	40		L	C	Chic	Fin	FS	Strm	V	Pier	B-Li	DD	Bos	.....	B-Li	A	4	M-E	Tut	R	Sav	½Fl	14	74.90	Ros	36x6	40x14	Smi	.....	10300	190
Garford 150 A-7½	5200	Buda BTU	5 x6½	40		L	C	Own	Fin	F	Strm	G	Sim	.....	DD	Spl	.....	Own	J	4	Spic	Per	C	Own	D	11.44	.....	Ros	36x6	40x7†	.....	.....	10200	162
Hall 7 Chain	.....	Cont E4	4½x5½	32.4	L	T	C	Own	Fin	FS	Zen	G	Dup	B-Li	DP	Bos	.....	B-Li	U	.	Opt	Det	C	.....	D	12	.....	Gem	36x5	40x6†	Smi	.....	8100	144
Kelly-Springfield K60	4600	Own	4½x6½	32.4	T	C	C	Lng	Fin	F	Zen	G	Pier	B.B.	D	Eis	W	Covt	A	4	Own	Per	C	Own	D	12.41	50.26	Gem	36x6	40x7†	Smi	.....	8900	Op
Kelly-Springfield K61	4900	Own	4½x6½	32.4	T	C	C	Lng	Fin	F	Zen	G	Pier	B.B.	D	Eis	W	Covt	A	4	Pet	Per	I	Clark	D	11.6	61.8	Gem	36x6	36x7	Cla	.....	9025	Op
MacDonald A	5750	Buda YTU	4½x6	32.4	L	C	C	Own	PT	F	Strm	G	Sim	B-Li	DD	Spl	.....	B-Li	U	4	Own	Own	I	Own	D	17.5	77	Own	40x7	Opt	Opt	.....	6000	...
*Mack AC6½	5750	Own AC	5 x6	40		L	C	Own	Fin	S	Zen	G	Own	Own	DP	Spl	.....	Own	UJ	3	Spic	Mer	C	Own	D	10.50	33.70	Own	36x6	40x12	.....	.....	8672	Op
*Mack AC7½	6000	Own AC	5 x6	40		L	C	Own	Fin	S	Zen	G	Own	Own	DP	Spl	.....	Own	UJ	3	Spic	Mer	C	Own	D	11.58	37.16	Own	36x7	40x7†	.....	.....	9050	Op
Old Reliable L	6000	Wau EU	5 x6¼	40		L	C	Chic	PT	S	Strm	G	Wau	Own	WD	Bos	.....	Own	J	4	Pet	Math	C	Own	D	10.86	54.9	Ros	36x6	40x7†	StM	.....	10240	136
Schacht 7	5050	Buda YTU	4½x6	32.4	L	G	C	Own	PT	F	Sheb	G	Dup	B.B.	D	Bos	.....	Own	A	4	M-E	Nat	W	Own	Flot	14	66.5	Own	36x6	40x7†	St M	.....	8500	168
Sterling 7½-Chain	6000	Ster EU	5 x6¼	40		L	C	Own	PT	F	Zen	V	Wau	H-S	WD	Eis	.....	Own	A	6	UM	Math	C	Own	D	7.26	44	Ros	36x6	40x7†	Smi	.....	10700	174
Tiffin 6 U-W	4500	Cont B2	4¾x6	36.1	L	G	C	Own	Fin	F	Sheb	G	Con	B.B.	DP	Bos	W	Cott	A	4	Pet	Kal	W	Shel	½Fl	10.25	53.3	Ros	36x6	40x12	Smi	.....	9200	168
Union J.W	5800	Wis RBU	5 x6	40		L	G	GO	Fin	F	Sheb	G	Dup	Full	DD	Eis	LN	Full	A	4	UP	Math	R	Walk	.....	11.5	69.0	Ros	36x6	40x14	Smi	.....	9250	193
Walter R	5350	Own DU	4½x6¼	32.4	L	G	C	Bus	PT	F	Strm	G	Wau	B-Li	D	Eis	W	War	A	4	Own	.....	...	Own	Flot	10	50	Ros	36x6	40x7†	Day	.....	8500	168
Wichita 8	5000	Wau DU	4½x6¼	32.4	L	G	G	.....	PT	F	Strm	G	Wau	Own	C	Wag	.....	Own	A	4	Own	Det	R	Own	½Fl	14	66.3	Ros	36x6	40x6†	Smi	.....	10000	165
Winther 140	.....	Wis-RBU	5 x6	40		L	G	Brm	PT	F	Mas	V	Dup	B.B.	DP	Eis	W	B-Li	A	4	Bld	Math	I	Clark	D	12	60.5	Ros	36x6	40x7†	Cla	.....	9600	162
Gasoline Tractor-Trucks																																	
Buffalo Six 2½	3400	Her CU3	4 x5⅛	25.6	L	P	C	Own	PT	F	Zen	V	Sim	Covt	D	Bos	Bos	Covt	...	10	Spic	Shel	W	Shel	½Fl	8.75	170	Ros	Opt	Opt	Way	Gdy	6200	155
*Federal Light Duty	2600	Cont C4	4½x5¼	27.2	L	C	C	Own	Fin	FS	Zen	G	Phar	B.B.	DP	Eis	.....	Det	A	4	Spic	Math	W	Timk	Flot	9.2	40.7	Gem	36x4	36x7	.....	Fir	4700	120
*Federal Heavy Duty	3350	Cont E4	4½x5½	32.4	L	C	T	Own	Fin	FS	Zen	G	Phar	B.B.	DP	Eis	.....	WC	A	4	Spic	Math	W	Timk	Flot	12	59.8	Gem	36x5	36x5†	.....	Fir	6800	114
Fulton D	2550	H Sp 7000	3½x5	19.6	L	G	C	GO	H	FS	Cart	G	.....	Covt	DP	Ber	.....	Covt	...	3	UP	.....	I	Russ	D	10.2	.....	Lav	36x4	36x6	Hoo	.....	3300	110
Koehler MT	3275	Her	4 x5 ⅛	25.6	L	G	C	Own	PT	F	Zen	G	Sim	B-Li	DD	Spl	.....	B-Li	A	4	Spic	Math	W	Timk	Flot	9.25	37	Lav	36x4	36x7	Way	.....	5000	129
Lombard 140H.P	.....	Spec 6	5¾x7	72.7	L	C	C	Spec	H	F	Strm	P	.....	.....	D	.....	.....	Spec	A	...	.....	.....	W	.....	.....	.....	.....	Spe	.....	.....	.....	.....	18000	...
Lombard 50 H.P	.....	Spec 4	5 x6¼	40		L	C	Spec	H	F	Strm	P	.....	.....	D	.....	.....	Spic	A	...	.....	.....	W	.....	.....	.....	.....	Spe	.....	.....	.....	.....	8000	...
*Mack AB 5-Ton	3400	Own AB	4 x5	25.6	L	C	C	Own	C	S	Zen	G	Own	Own	DD	Spl	.....	Own	U	4	Spic	Mer	C	Own	D	10.5	42.27	Own	36x4	36x4†	.....	.....	4940	120
*Mack AC 7-Ton	4950	Own AC	5 x6	40		L	C	Own	Fin	S	Zen	G	Own	Own	DP	Spl	.....	Own	UJ	4	Spic	Mer	C	Own	D	9.69	62.20	Own	36x5	40x5†	.....	.....	7670	120
*Mack AC 10-Ton	5500	Own AC	5 x6	40		L	C	Own	Fin	S	Zen	G	Own	Own	DP	Spl	.....	Own	UJ	4	Spic	Mer	C	Own	D	10.5	67.38	Own	36x6	40x6†	.....	.....	8250	120
*Mack AC 13-Ton	5750	Own AC	5 x6	40		L	C	Own	Fin	S	Zen	G	Own	Own	DP	Spl	.....	Own	UJ	4	Spic	Mer	C	Own	D	11.58	74.29	Own	36x6	40x12	.....	.....	8272	120
*Mack AC 15-Ton	6000	Own AC	5 x6	40		L	C	Own	Fin	S	Zen	G	Own	Own	DP	Spl	.....	Own	UJ	4	Spic	Mer	C	Own	D	12.92	82.92	Own	36x7	40x7†	.....	.....	8650	120
MasterDDT	3390	Buda HU	4¼x5½	28.9	L	C	C	Chic	PT	F	Strm	G	Wau	B-Li	D	Eis	W	War	A	4	Own	.....	...	Own	Flot	10	50	Ros	36x6	40x6†	Day	.....	4500	130
Walter ST	4850	Own DU	4½x6¼	32.4	L	P	Bus	PT	F	Strm	G	Pier	B-Li	DP	Bim	.....	B-Li	U	4	Spic	Shel	W	Timk	Flot	8.75	42.35	Gem	34x4	36x7	Wal	.....	7900	126
Watson	4050	Cont E4	4½x5¾	32.4	L	P	Jam	C	FB	Strm	G	Pier	B-Li	DP	Sim	.....	B-Li	U	4	Spic	Shel	W	Timk	Flot	8.75	42.35	Gem	34x4	36x6†	M&C	.....	6800	80

ELECTRIC COMMERCIAL CARS

E. C. M. Name and Model Number	Carrying Capacity	Chassis Weight	Chassis Price	Maximum Speed	Battery	Mileage Per Charge	Motor	Controller	Speeds Forward	Drive	Rear Axle	Springs	Front Tires	Rear Tires	Steering Gear	Wheelbase	Per Cent of Weight on Rear Wheels
Atlantic 1C	2000	2770	.....	12	Opt	.....	G-E	G-E	4	C	Timk	S-El	34x4	36x4	Ross	193	65
Atlantic 2C	4000	3590	.....	11	Opt	.....	G-E	G-E	4	C	Timk	S-El	34x4	36x3†	Ross	115	65
Atlantic 3C	7000	5220	.....	10	Opt	.....	G-E	G-E	5	C	Timk	.....	36x5	40x5†	Ross	135	65
Atlantic 5C	10000	6230	.....	9	Opt	.....	G-E	G-E	5	C	Timk	S-El	36x6	40x5†	Ross	144	65
Atlantic 6C	13000	6940	.....	8	Opt	.....	G-E	G-E	5	C	Timk	S-El	36x6	40x6	Ross	156	65
C-T D-1	1000	2200	1585	14	Opt	55	G-E	Own	4	C-T	Flot	Shel	36x3	36x3½	W	100	69
C-T B-1.5	1500	2300	1985	14	Opt	60	G-E	Own	4	C-T	Flot	Shel	36x3	36x4	W	91⅝	65
C-T D-1.5	1500	2300	1985	14	Opt	60	G-E	Own	4	C-T	Flot	Shel	36x3	36x4	W	116	71
C-T B-2	2000	2400	2150	14	Opt	50	G-E	Own	4	C-T	Flot	Shel	36x3½	36x5	W	101	66
C-T D-2	2000	2400	2150	14	Opt	50	G-E	Own	4	C-T	Flot	Shel	36x3½	36x5	W	124	70
C-T B-4	4000	4000	2575	12	Opt	50	G-E	Own	4	C-T	Flot	Shel	36x4	36x4†	W	116	68
C-T C-6	6000	4200	2575	8	Opt	35	G-E	Own	4	I	Dead	Shel	36x4	36x4†	W	116	70
C-T C-7	7000	5000	3550	10	Opt	45	G-E	Own	4	I	Dead	Shel	36x5	36x5†	W	126	65
C-T A-7	7000	5800	3850	11	Opt	45	G-E	Own	4	I	Dead	Shel	36x6	36x4†	W	122	60
C-T A-10	10000	6500	3960	10	Opt	45	G-E	Own	4	I	Dead	Shel	36x7	36x5†	W	132	59
*Kelland A	1000	1850	1400	15	Opt	50	G-E	G-E	4	R	Flot	Mer	34x3	34x3	Ross	102	60
*Kelland B	1500	1950	1450	15	Opt	50	G-E	G-E	4	R	Flot	Mer	34x3½	34x3½	Ross	102	60
*Kelland C	2000	2150	1500	15	Opt	50	G-E	G-E	4	R	Flot	Mer	34x3½	34x4	Ross	102	60
Lansden BG ¾	.....	1400	1600	15	Opt	50	G-E	G-E	4	R	Flot	SP	32x4½	32x4½	Lav	108	50
Lansden MC 1	.....	2900	1850	12	Opt	50	G-E	G-E	4	C	D	SP	36x3	36x3½	KH	108	60
Lansden MD 2	.....	4400	2250	11	Opt	50	G-E	G-E	4	C	D	SP	36x4	36x3†	KH	120	60
Lansden ME 3½	.....	5700	2950	10	Opt	45	G-E	G-E	4	C	D	SP	36x5	36x4†	KH	133	60
Lansden MF 5	.....	7500	3350	9	Opt	40	G-E	G-E	4	C	D	SP	36x6	36x5†	KH	146	60
Lansden MG 6	.....	8900	.....	7	Opt	35	G-E	G-E	4	C	D	SP	36x7	36x6†	KH	156	60
Milburn Model 40	2000	1990	1985	15	Opt	50	G-E	Own	4	.....	W	Math	32x4½	33x5	Gem	128	62
Milburn Model 43	1000	1690	1585	18	Opt	50	G-E	Own	4	.....	W	Math	32x4½	32x4½	Gem	115	56
*Walker Model 22	2000	2500	.....	14	Opt	60	West	West	5	O	Own	Math	34x3½	36x4	Ross	101	66
*Walker Model 42	4000	3700	.....	13	Opt	60	West	West	5	O	Own	Math	36x4	36x6	Ross	114	66
Walker M 2	1250	2300	.....	15	Opt	60	West	West	5	O	Own	Math	34x3	36x3½	Ross	94	66
Walker N	10000	6300	.....	10	Opt	50	West	West	5	O	Own	Math	36x6	38x6†	Ross	141	66
Walker P	7000	5300	.....	11	Opt	50	West	West	5	O	Own	Math	36x5	38x5†	Ross	131	66
Walter EN	4000	4400	2900	15	Opt	50	G-E	G-E	4	O	Dead	.....	36x4	36x7	Gem	114	60
Walter EL	7000	4550	3600	13½	Opt	50	G-E	G-E	4	O	Dead	.....	36x5	36x4	Gem	130	60
Walter ES	10000	7200	4350	12	Opt	50	G-E	G-E	4	O	Dead	.....	36x6	40x6	Ros	150	60
Ward WS 2	.....	1650	.....	13	Opt	45	G-E	Own	4	W	Shel	Shel	32x3	32x3½	Own	88	60
Ward WA	.....	2860	.....	12	Opt	45	G-E	Own	4	W	Shel	Shel	32x3½	34x4	Own	90	60
Ward WA 2	.....	2470	.....	12	Opt	45	G-E	Own	4	W	Shel	Shel	32x3½	34x4	Own	90	60
Ward WB	.....	3850	.....	10.5	Opt	40	G-E	G-E	4	W	Shel	Shel	34x4	36x5	Own	102	60
Ward WB 2	.....	3350	.....	10.5	Opt	40	G-E	G-E	4	W	Shel	Shel	34x4	36x5	Own	102	60
Ward WD	.....	4875	.....	9	Opt	35	G-E	G-E	4	W	Shel	Shel	36x5	36x7	Own	114	60
Ward WD 2	.....	4350	.....	9	Opt	35	G-E	G-E	4	W	Shel	Shel	36x5	36x7	Own	114	60
Ward WF	.....	7200	.....	8	Opt	30	G-E	G-E	5	W	Shel	Shel	36x6	36x10	Own	132	70
Ward WF 2	.....	6450	.....	8	Opt	30	G-E	G-E	5	W	Shel	Shel	36x6	36x10	Own	132	70
Ward WH	.....	9400	.....	7	Opt	26	G-E	G-E	5	W	Shel	Shel	36x7	40x12	Own	144	70
Ward WH 2	.....	8200	.....	7	Opt	26	G-E	G-E	5	W	Shel	Shel	36x7	40x12	Own	144	70

Manufacturers and Models Included in Specifications on Preceding Pages

Acason—¾, 1, 1½, 2½, 3½, 5—Acason Motor Truck Co., Wyandotte, Mich.
Ace—1½, 2½—American Motor Truck Co., Newark, Ohio.
Acme—1, 1½, 2 3, 4½, 6¼—Acme Motor Truck Co., Cadillac Mich.
American—2½, 4—American Motor Truck & Tractor Co., Portland, Conn.
Apex—1, 1½, 2½, 3½—Hamilton Motor Co., Grand Haven, Mich.
Armleder—1, 1½, 2½, 3½—O. Armleder Co., Cincinnati, Ohio.
Atco—1½, 2½—American Truck & Trailer Corp., Kankakee, Ill.
Atlantic—1, 2, 3, 5, 6—Atlantic Electric Vehicle Co., Newark, N. J.
Atlas—1—Atlas Truck Corp., York, Pa.
Atterbury—1½, 2½, 3½, 5—Atterbury Motor Car Co., Buffalo, N. Y.
Autocar—1½, 2, 5—Autocar Co., Ardmore, Pa.
Available—1½, 2, 2½, 3½, 5, 7—Available Truck Co., Chicago, Ill.
Avery—1—Avery Company, Peoria, Ill.
Bell—1, 1½, 2½—Iowa Motor Truck Co., Ottumwa, Ia.
Bessemer—1, 1½, 2½, 4—Bessemer Motor Truck Co., Grove City, Pa.
Birch—1—Birch Motor Cars, Chicago, Ill.
Bridgeport—1½, 2½, 3½—Bridgeport Motor Truck Co., Bridgeport, Conn.
Brinton—1½, 2½—Brinton Motor Truck Co., Philadelphia, Pa.
Brockway—¾, 1½ 2½, 3½, 5—Brockway Motor Truck Co., Cortland, N. Y.
Buffalo—1½, 2½T T—Buffalo Truck & Tractor Corp., Clarence, N. Y.
C. T.—1, 1½, 2, 3½, 5—Commercial Truck Co., Philadelphia, Pa.
Capitol—1½, 2½, 3½—Capitol Motors Corp., Fall River, Mass.
Casco—1—Casco Motors, Inc., Portland, Maine.
Case—2—J. I. Case Plow Works Co., Racine, Wis.
Chevrolet—¾, 1—Chevrolet Motor Co. of Mich., Flint, Mich.
Chicago—1½, 2½, 3½, 5—Chicago Motor Truck, Inc., Chicago, Ill.
Climber—1½—Climber Motor Corp., Little Rock, Ark.
Clydesdale—¼, 1, 1½, 2½, 3½, 5—Clydesdale Motor Truck Co., Clyde, Ohio.
Collier—1, 1½, 2, 2½—Collier Motor Truck Co., Bellevue, Ohio.
Commerce—1¼, 1½, 2, 2½—Commerce Motor Truck Co., Detroit, Mich.
Concord—1½, 2, 2½, 3—Abbott-Downing Truck & Body Co., Concord, N. H.
Corbitt—1, 1½, 2, 2½, 3, 4, 5—Corbitt Motor Truck Co., Henderson, N. C.
Cyclone—1½—The Cyclone Motor Corp., Greenville, S. C.
Dart—1½, 2½, 3½—Dart Truck & Tractor Corp., Waterloo, Ia.
Day-Elder—1, 1½, 2, 2½, 3½, 5—Day-Elder Motors Corp., Newark, N. J.
Dearborn—1, 1½, 2—Dearborn Truck Co., Chicago, Ill.
Defiance—1, 1½, 2—Defiance Motor Truck Co., Defiance, Ohio.
Denby—1, 1½, 2, 3, 4, 5—Denby Motor Truck Co., Detroit, Mich.
Dependable—1, 1½, 2, 2½, 3½—Dependable Truck & Tractor Co., East St. Louis, Ill.
Diamond T—1¼, 1½, 2, 3½, 5—Diamond T Motor Car Co., Chicago, Ill.
Diehl—1, 1½—Diehl Motor Truck Works, Philadelphia, Pa.
Dixon—Dixon Motor Truck Co., Altoona, Pa.
Dodge—½—Dodge Bros., Detroit, Mich.
D-Olt—1½, 2½, 5—D-Olt Motor Truck Co., Inc., Long Island City, N. Y.
Dorris—2, 3½—Dorris Motor Car Co. St. Louis, Mo.
Dort—½—Dort Motor Car Co., Flint, Mich.
Double Drive—4—Double Drive Truck Co., Chicago, Ill.
Douglas—1½, 2, 3—Douglas Motors Corp., Omaha, Neb.
Drake—2—Drake Motor & Tire Mfg. Corp., Knoxville, Tenn.
Duplex—2, 3½—Duplex Truck Co., Lansing, Mich.
Eagle—2—Eagle Motor Truck Corp., St. Louis, Mo.
Erie—1½, 2½—Erie Motor Truck Mfg. Co., Erie, Pa.
Eugol-1—Eugol Motor Truck Co., Kenosha Wis.
F. W. D.—3—Four-Wheel Drive Auto Co., Clintonville, Wis.
Facto—2½—Facto Motor Trucks, Springfield, Mass.
Fageol—2, 3, 4, 5—Fageol Motors Co., Oakland, Cal.
Fargo—2—Fargo Motor Truck Co., Chicago, Ill.
Federal—¾, 1, 1½,2, 3½, 5, T.T.—Federal Motor Truck Co., Detroit, Mich.
Ford—1—Ford Motor Co., Highland Park, Mich.
Forschler—1, 1½, 2, 3—Forschler Motor Truck Mfg. Co., New Orleans, La.
Front Drive—1½—Double Drive Truck Co., Chicago, Ill.
Fulton—1, 2, T.T.—Fulton Motors Corp., Farmingdale, N. Y.
G. M. C.—1, 2, 3½, 5—General Motors Truck Co., Pontiac, Mich.
G. W. W.—1½—Wilson Truck Mfg. Co., Henderson, Ia.
Garford—¾, 1¼, 2, 3½ 5, 7½—Garford Motor Truck Co., Lima, O.
Gary—1, 2, 2½, 3½, 5—Gary Motor Corp., Gary, Ind.
Gersix—1½, 2½, 3—Gersix Mfg. Co., Seattle, Wash.
Giant—1½, 2½, 3½, 5—Giant Truck Corp., Chicago Heights, Ill.
Graham—1, 1½—Graham Brothers, Evansville, Ind.
Gramm-Bernstein—1, 1½, 2, 3, 3½, 4, 5—Gramm-Bernstein Motor Truck Co., Lima, Ohio.
Hal-Fur—2, 3½—Hal-Fur Motor Truck Co., Cleveland, Ohio.
Hall—2½, 3½, 5, 7—Lewis-Hall Motors Corp., Detroit, Mich.
Harvey—2, 2½, 3½—Harvey Motor Truck Co., Harvey, Ill.
Hendrickson—2½, 3½, 5—Hendrickson Motor Truck Co., Chicago, Ill.
Higrade—1, 1½—Higrade Motors Co., Harbor Springs, Mich.
H. R. L.—¾, 1½, 2½—H. R. L. Motor Co., Seattle, Wash.
Hug—1½—The Hug Co., Highland, Ill.
Huriburt—1½, 2½, 3½, 5—Harrisburg Mfg. & Boiler Co., Harrisburg, Pa.
Huron—1½, 2½—Huron Truck Co., Bad Axe, Mich.
Independent—1, 1½, 2½—Independent Motor Truck Co., Inc., Davenport, Ia.
Indiana—1½, 2, 2½, 3½, 5—Indiana Truck Corp., Marion, Ind.
International—1, 1½, 2, 3, 5—International Harvester Co., Chicago, Ill.
Jackson—3½—Jackson Motors Corp., Jackson, Mich.
Kalamazoo—1½, 2½, 3½—Kalamazoo Motor Corp., Kalamazoo, Mich.
Kearns—¾, 1½—Kearns-Dughie Motors Co., Danville, Pa.
Kelland—Kelland Motor Car Co., Newark, N. J.

Kelly-Springfield—1½, 2½, 3½, 5, 6—Kelly-Springfield Motor Truck Co., Springfield, O.
Keystone—2—Keystone Motor Truck Corp., Philadelphia, Pa.
Kimball—2, 2½, 3, 4, 5—Kimball Motor Truck Co., Los Angeles, Cal.
Kissel—1, 1½, 2½, 4, 5—Kissel Motor Car Co., Hartford, Wis.
Kleiber—1, 1½, 2, 2½, 3½, 5—Kleiber & Co., Inc., San Francisco, Cal.
Koehler—1½, 2½, 3½, T.T.—H. J. Koehler Motors Corp., Bloomfield, N. J.
Lange—2, 2½—Lange Motor Truck Co., Pittsburgh, Pa.
Lansden—¾, 1, 2, 3½, 5, 6—Lansden Company, Danbury, Conn.
Larrabee-Deyo—1½, 2½, 3½, 5—Larrabee-Deyo Motor Truck Co., Inc., Binghamton, N. Y.
Lombard—T.T.—Lombard Auto Tractor Truck Corp., New York, N. Y.
Luedinghaus—1, 1½, 2—Luedinghaus-Espenschied Wagon Co., St. Louis, Mo.
Maccar—1½, 2, 3, 4, 5—Maccar Truck Co., Scranton, Pa.
MacDonald—7—MacDonald Truck & Tractor Co., San Francisco, Cal.
Mack—1½, 2, 2½, 3½, 5, 6½, 7½, T.T.—International Motor Co., New York, N. Y.
Master—1½, 2½, 3½, 5, T.T.—Master Trucks, Inc., Chicago, Ill.
Maxwell—1½—Maxwell Motor Co., Inc., Detroit, Mich.
Menominee—1, 1½, 2, 3½, 5—Menominee Motor Truck Co., Menominee, Mich.
Moline—1½—Moline Plow Co., Moline, Ill.
Moreland—1, 1½, 2½, 4, 5—Moreland Motor Truck Co., Los Angeles, Cal.
Napoleon—¾, 1, 1½—Napoleon Motors Co., Traverse City, Mich.
Nash—1, 2—Nash Motors Co., Kenosha, Wis.
Nelson-LeMoon—1½, 2½, 3½, 5—Nelson & LeMoon, Chicago, Ill.
Netco—2, 2½—New England Truck Co., Fitchburg, Mass.
Niles—2—South Main Motor Co., Pittsburgh, Pa.
Noble—1½, 2, 2½, 3½—Noble Motor Truck Co., Kendallville, Ind.
Northway—2, 3½—Northway Motors Co., Natick, Mass.
Norwalk—1, 1½—Norwalk Motor Car Co., Martinburg, W. Va.
O. K.—1½, 2½, 3½—Oklahoma Auto Mfg. Co., North Muskogee, Okla.
Ogden—¼, 1½, 2½, 3½, 5—Ogden Motor Truck Co., Chicago, Ill.
Old Reliable—1½, 2½, 3½, 5, 6—Old Reliable Motor Truck Co., Chicago, Ill.
Oldsmobile—1—Olds Motor Works, Lansing, Mich.
Olympic—2½—Olympic Motor Truck Co., Tacoma, Wash.
Oneida—2, 2½, 3½, 5—Oneida Motor Truck Co., Green Bay, Wis.
Oshkosh—2, 2½—Oshkosh Motor Truck Mfg. Co., Oshkosh, Wis.
Packard—2, 3, 5—Packard Motor Car Co., Detroit, Mich.
Paige—1½, 2½, 3½—Paige-Detroit Motor Car Co., Detroit, Mich.
Parker—1, 2½, 3½, 5—Parker Motor Truck Co., Milwaukee, Wis.
Patriot—1, 2, 3—Patriot Mfg. Co., Lincoln, Neb.
Penn—1, 2—Penn Motors Corp., 1714 N. Broad St., Philadelphia, Pa.
Pierce-Arrow—2, 3½, 5—Pierce-Arrow Motor Car Co., Buffalo, N. Y.
Pioneer—1—Pioneer Truck Co., Chicago, Ill.
Pittsburger—2½, 3½—Pittsburgh Truck Mfg. Co., Pittsburgh, Pa.
Power—1½, 3½—Power Truck & Tractor Co., St. Louis, Mo.
Premocar—1½—Preston Motors Corp., Birmingham, Ala.
Rainier—¾, 1, 1½, 2, 2½, 3½, 5—Rainier Motor Corp., New York N. Y.
Ranger—2—Southern Motor Mfg. Ass'n, Ltd., Houston, Tex.
Reliance—1½, 2½—Reliance Motor Truck Co., Appleton, Wis.
Reo—1¼—Reo Motor Car Co., Lansing, Mich.
Republic—¾, 1, 1½, 2½, 3½—Republic Motor Truck Co., Inc., Alma, Mich.
Rowe—1½, 2, 3, 4, 5—Rowe Motor Mfg. Co., Lancaster, Pa.
Ruggles—1½, 2—Ruggles Motor Truck Co., Saginaw, Mich.
Rumely—1½—Advance-Rumely Thresher Co., Inc., La Porte, Ind.
Samson—¾, 1¼—Samson Tractor Co., Janesville, Wis.
Sanford—2, 3½, 5—Sanford Motor Truck Co., Syracuse, N. Y.
Schacht—2, 3, 4, 5, 7—G. A. Schacht Motor Truck Co., Cincinnati, O.
Schwartz—1, 2, 3, 5—Schwartz Motor Truck Co., Reading, Pa.
Selden—1½, 2½, 3½, 5—Selden Truck Corp., Rochester, N. Y.
Service—¾, 1¼, 1½, 2, 2½, 3, 3½, 6—Service Motor Truck Co., Wabash, Ind.
Signal—1, 1½, 2½, 3½, 5—Signal Truck Corp., Detroit, Mich.
Southern—1, 1½, 2—Southern Truck & Car Corp., Greenboro, N. C.
Standard—1½, 2½, 3½, 5—Standard Motor Truck Co., Detroit, Mich.
Sterling—1½, 2, 2½, 3½, 5, 7½—Sterling Motor Truck Co., Milwaukee, Wis.
Stewart—¾, 1, 1½, 2, 2½, 3½—Stewart Motor Corp., Buffalo, N. Y.
Stoughton—¾, 1, 1½, 2, 3—Stoughton Wagon Co., Stoughton, Wis.
Super Truck—2½, 3½, 5—O'Connell Motor Truck Co., Waukegan, Ill.
Superior—1, 2—Superior Motor Truck Co., Atlanta, Ga.
Tiffin—1½, 2½, 3½, 5, 6—Tiffin Wagon Co., Tiffin, Ohio.
Titan—2, 3½, 5, 6—Titan Truck Co., Milwaukee, Wis.
Thomart Speed—1¼—Thomart Motor Co., Kent, Ohio.
Tower—1½, 2½, 3½—Tower Motor Truck Co., Greenville, Mich.
Traffic—1½, 2, 3—Traffic Motor Truck Corp., St. Louis, Mo.
Transport—1, 1½, 2, 3, 3½, 5—Transport Truck Co., Mt. Pleasant, Mich.
Traylor—1½, 2, 3, 5—Traylor Eng. & Mfg. Co., Cornwells, Pa.
Triangle—¾, 1½, 2, 2½—Triangle Motor Truck Co., St. Johns, Mich.
Triumph—1½, 2, 2½—Triumph Truck & Tractor Co., Kansas City, Mo.
Twin City—2, 3½—Twin City Company, Minneapolis, Minn.
Ultimate—1½, 2, 2½, 3, 5—Vreeland Motor Co., Inc., Newark, N. J.
Union—2½, 4, 6—Union Motor Truck Co., Bay City, Mich.
United—1½, 2½, 3½, 5—United Motors Co., Grand Rapids, Mich.
Ursus—1, 1½, 2½, 3½—Ursus Motor Co., Inc., Chicago, Ill.
U. S.—1¼, 1½, 3, 4, 5—United States Motor Truck Co., Cincinnati, Ohio.
Velie—1½—Velie Motors Corp., Moline, Ill.
Vim—½, 1, 2, 3—Vim Motor Truck Co., Philadelphia, Pa.
Vulcan—2½—Vulcan Mfg. Co., Seattle, Wash.
Walker—½, 1, 2, 3½, 5—Walker Vehicle Co., Chicago, Ill.
Walker-Johnson—2, 2½—Walker-Johnson Truck Co., Woburn, Mass.
Walter—2, 2½, 3½, 5, 7—T. T. Walter Truck Co., New York, N. Y.
Walter—Fink Dumont White, Inc., New York, N. Y.
Ward—¼, 1, 2, 3½, 5—Ward Motor Vehicle Co., Mt. Vernon, N. Y.
Ward La France—2½, 3½, 5—Ward La France Truck Co., Inc., Elmira, N. Y.
Watson—¾, 3½, T.T.—Watson Wagon Co., Canastota, N. Y.
White—¾, 2, 3½, 5—White Co., Cleveland, Ohio.
White Hickory—1, 1½, 2½—White Hickory Motor Corp., Atlanta, Ga.
Wichita—1, 2, 3, 3½, 5½—Wichita Falls Motors Co., Wichita Falls, Tex.
Wilcox—1, 1½, 2½, 3½, 5—Wilcox Trux, Inc., Minneapolis, Minn.
Wilson—1½, 2½, 3½, 5—J. C. Wilson Co., Detroit, Mich.
Winther—1, 1½, 2, 2½, 3½, 5, 7—Winther Moter Truck Co., Kenosha, Wis.
Wisconsin (Loganville)—2, 2½—Wisconsin Truck Co., Loganville, Wis.
Wisconsin (Sauk City)—1, 1½, 2½, 3½—Wisconsin Farm Tractor Co., Sauk City, Wis.
Witt-Will—1½, 2—Witt-Will Co., Inc., Washington, D. C.
Wolverine—1, 1½, 2, 2½, 3½—American Commercial Car Co., Detroit, Mich.
Yellow Cab—¾, 1¼—Yellow Cab Mfg. Co., Chicago, Ill.

Metal and Rubber Market

Steel Products Prices

Per ton—Pittsburgh—	
Billets—Bessemer	$35 00 a .....
Open hearth	35 00 a .....
Forging	40 00 a .....
Sheet bars	35 00 a .....
Slabs	35 00 a .....

Sheets

The following prices are for 100-bundle lots and over f.o.b. mill:

Blue Annealed Sheets—	
Pittsburgh (base)	$2 40 a 2 50
Philadelphia	2 72½a 2 82½
New York	2 74 a 2 84

Finished Iron and Steel

Tank plates, Pittsburgh	$1 70 a .....
Tank plates, New York	2 04 a .....
Steel bars, Pittsburgh	1 70 a .....
Steel bars, New York	2 04 a .....
Iron bars, ref'd, Pittsburgh	2 20 a .....

Iron and Steel at Pittsburgh

Skelp, grooved steel	$1 70 a .....
Skelp, sheared steel	1 70 a .....
Strip steel, cold	4 00 a .....
Strip steel hot	2 25 a 2 40
Steel, melting scrap	17 00 a 17 50

Antimony

The market remains unchanged, with little or no demand for futures and only a few inquiries for spot.

Manganese

The general opinion seems to be that the date when the tariff bill becomes operative has at least been put forward by a month from the earlier calculation, and instead of early in September, the first of October would seem to be the more likely date. This postponing has resulted in buyers being again interested in shipment from abroad. This refers particularly to manganese ore, for which the demand continues very heavily.

Old Metals

Following are dealers' buying and selling prices for large quantities f.o.b. cars New York:

	Buying	Selling
Aluminum—		
Cast scrap	10 a 10½	11 a 11¼
Sheet scrap	10 a 10½	11 a 11¼
Clippings	13 a 13½	14½a 14¾
Copper—		
Light and bottoms	8 a 8½	9½a 9¾
Heavy, cut & crucible	11 a 11½	12¼a 12½

Rubber Easy

Para—Up-river, fine	19 a 20
Up-river, coarse	13¼a ....
*Island, fine	17¼a ....
Island, coarse	8¾a ....
Caucho, ball, upper	13½a ....
Caucho, ball, lower	11¼a ....
Cameta	8¾a ....
*Centrals—Corinto	...a 10
Ball	13¾a ....
*Esmeralda	...a 10
*Mexican scrap	...a 9⅛
*Guayule—Wet	...a 18
*Guayule—Dry	...a 20
*Balata—	
Block, Ciudad	...a 58
Block, Colombian	...a 42
Panama	...a 40
Sheet	68 a 70
*Benguella, No. 2	7 a 9
*Kassal—	
Pr. Black	14 a ....
Pr. red	10 a 12

*Nominal.

Scrap Rubber

Inner Tubes, No. 1	...a 3½
Inner tubes, No. 2	...a 2¾
Tires—automobile	¼a ½

Taxicabs Popular in Rome

The first regular taxicab service was established in Rome during May, 1921, says a recent report to the Department of Commerce from Commercial Attache H. C. MacLean, Rome. Prior to that time, with the exception of street cars and a few touring cars for hire, the usual European one-horse cab was the only means of transportation. Since then, however, the number has increased rapidly and there are now hundreds of taxis in use in Rome, principally Fiats, and a considerable number of Ceiranos and Diattos.

Although the use of motor taxis is sure to increase in the immediate future, it is not believed that there is any demand for American cars for the purpose, owing to the high rate of duty and unfavorable exchange.

Motors Are Solving Chicago's Strike Transportation Problem

The Utility and Practicability of Motor Transportation Units for Passenger Haulage is Being Amply Demonstrated During This Huge Strike

By A. V. COMINGS

ANY doubt as to the ability of the motor bus to handle the surface transportation of any large city was disposed of once and for all time during the traction tie-up in Chicago in early August, when both street car and elevated lines ceased operation.

Motor transportation took up the burden of handling a population of nearly three million, carried the workers to their jobs in the morning and back to their homes at night, and had time to spare during the intervening hours when traffic was lighter.

The motor truck drafted into service in this work, and the existing lines of motor buses, carried a tremendous share of this burden, and they proved beyond any question that, properly equipped and properly routed and handled, motor equipment is equal today to handling the entire surface transportation of any city, no matter how large nor what the difficulties of the situation may be.

Immediately with the calling of the strike the traffic department of the Chicago police force promulgated rules governing motor traffic in the down town, or "loop" district. The "loop" district, as any one familiar with Chicago knows, is probably the most congested business district in the world.

Chicagoans Suffered Little Inconvenience From the Strike. Every Available Commercial Unit Was Pressed Into Service

One way streets were designated all through this district, heavy traffic was shunted to the right on all streets, and with extra traffic officers at every corner traffic moved fairly smooth, even on the first day's tie up.

On the second day, with drivers and pedestrians more familiar with the system, the streams of traffic moved very evenly and smoothly, and with each succeeding day conditions became better.

It is estimated that Chicago has a million workers, and this mass of humanity was handled with a celerity and system that surprised even those on whom the burden of responsibility rested.

Motor cars by the thousands helped in the work, and there was hardly a commercial motor truck in the city that didn't at some time haul its quota of workers to or from the business district or transport them through the outlying sections.

Even traffic experts who had discounted the possibility of handling modern big city surface transportation entirely by motor bus, were surprised at the apparent ease with which this great city accomplished what had been hitherto considered impossible.

There were delays, it is true, but jumping from street car and elevated transportation overnight to complete motorized service is too huge a task not to admit of some confusion at the start. The tremendous improvement noted with each succeeding day proved what careful analysis and routing could accomplish if the task were approached properly and handled with experience.

The experience of Chicago during the period of the strike should prove of immense value to the manufacturers of motor buses and motor transportation units built for the commercial haulage field. For it furnished the first great example of what may be done with complete motor equipment in handling the entire surface transportation of a great city, and doubters may no longer say: "It can't be done."

Chicago, as on many previous occasions, has done what many thought impossible.

From the Chicago Tribune

What Necessity Can Do

Price List of Truck Pneumatic Tire Casings, With Capacities and Inflation Pressures of Larger Sizes

	30 3½	32 4	34 4	32 4½	34 4½	33 5	34 5	35 5	36 x 6			38 x 7			40 x 8			42 x 9			44 x 10		
									Price	Carrying Capacity	Inflation Pressure	Price	Carrying Capacity	Inflation Pressure	Price	Carrying Capacity	Inflation Pressure	Price	Carrying Capacity	Inflation Pressure	Price	Carrying Capacity	Inflation Pressure
Achilles Rubber & Tire Co., Binghampton, N. Y.																							
Achilles Cord, non-skid	30.00	.....	.....	.....	.....	.....	60.00	.....	83.00	2200	90	125.00	3000	100	.....	....	...	.....	....	...	.....	....	...
Acme Rubber Mfg. Co., Trenton, N. J.																							
Acme Cord, non-skid	18.00	32.00	34.00	41.00	43.00	52.00	.....	54.00	82.00	2200	90	115.00	3000	100	.....	....	...	.....	....	...	.....	....	...
Ajax Rubber Co., Inc., New York, N. Y.																							
Ajax Cord, non-skid	18.90	32.85	34.80	42.70	44.80	53.10	.....	55.75	78.55	2000	90	113.85	3000	100	146.65	4000	100	.....	....	...	317.25	6000	130
Amazon Rubber Co., Akron, O.																							
Amazon Cord, non-skid	18.00	32.40	34.25	41.90	43.90	52.15	.....	54.75	78.05	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
American Rubber & Tire Co., Akron, O.																							
American Cord, non-skid	18.75	34.00	36.00	43.75	45.25	54.25	57.50	56.75	82.65	2300	90	115.40	3100	100	148.70	4100	110	.....	....	...	.....	....	...
Armstrong Rubber Co., Inc., Garfield, N. J.																							
Armstrong Super Size Cord, non-skid	18.90	34.00	36.00	44.00	46.05	54.75	55.70	57.50	86.00	2200	90	121.00	3000	100	156.00	4000	110	.....	....	...	.....	....	...
Biekre Tire & Rubber Co., St. Paul, Minn.																							
Biekre Cord, non-skid	.....	33.45	35.40	41.95	43.90	52.20	.....	54.70	97.50	2200	90	.....	....	...	156.75	4000	110	.....	....	...	.....	....	...
Braender Rubber & Tire Co., Rutherford, N. J.																							
Braender Bull-Dog Super, non-skid	18.00	32.40	34.25	41.90	43.90	52.15	54.10	54.75	78.55	2200	90	113.85	3000	100	146.65	4000	110	.....	....	...	.....	....	...
Brunswick-Balke-Collender Co., Chicago, Ill.																							
Brunswick Cord, non-skid	18.50	32.50	34.50	42.70	44.85	53.20	53.75	55.85	80.45	2200	90	113.85	3000	100	146.65	4000	110	198.36	5000	120	.....	....	...
Burdick Tire & Rubber Co., Noblesville, Ind.																							
Air Bag Cord, non-skid	39.50	58.75	62.25	67.25	70.50	80.00	.....	83.00	143.00	2200	90	184.00	3000	100	238.00	4000	110	.....	....	...	.....	....	...
Canton-Blackstone Co., Youngstown, O.																							
Canton Cord, non-skid	20.00	33.45	35.35	43.25	45.30	53.80	55.10	56.50	82.65	2200	90	115.45	3000	100	148.70	4000	110	.....	....	...	.....	....	...
Combination Rubber Mfg. Co., Bloomfield, N. J.																							
Combination Viking Cord, non-skid	18.00	32.40	34.25	41.90	43.90	52.15	53.50	54.75	82.65	2200	90	.....	....	...	148.70	4000	110	.....	....	...	.....	....	...
Combination Viking Standard Fabric	12.15	.....	.....	.....	.....	.....	.....	.....	.....	....	...	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Combination Viking Standard Cord	13.85	.....	.....	.....	.....	.....	.....	.....	.....	....	...	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Cooper Corporation, Findlay, Ohio																							
Cooper Cord, non-skid	18.00	32.40	34.25	41.00	44.35	53.75	.....	57.00	81.80	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Dayton Rubber Mfg. Co., Dayton, Ohio																							
Thorobred Cord, non-skid	17.95	32.75	34.95	41.75	43.75	51.75	53.50	54.50	82.25	2200	90	120.10	3000	100	155.20	4000	110	.....	....	...	.....	....	...
Empire Tire & Rubber Co., Trenton, N. J.																							
Empire Cord, non-skid	19.50	32.40	34.25	41.90	43.90	52.15	55.40	54.75	79.30	2000	90	112.20	2700	100	144.55	3650	110	.....	....	...	.....	....	...
Erie Tire & Rubber Co., Sandusky, O.																							
Erie Cord, non-skid	15.00	32.40	34.25	41.90	43.90	52.15	53.90	56.75	90.00	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Excel Rubber Co., Wadsworth, Ohio																							
Flint Cord, non-skid	24.50	46.30	48.95	52.35	56.50	65.20	.....	68.45	120.00	2200	90	170.00	3000	100	215.00	4000	110	.....	....	...	.....	....	...
Falls Rubber Co., Cuyahoga Falls, O.																							
Falls Cord, non-skid	19.50	34.00	36.50	43.25	45.75	60.00	62.50	65.00	92.00	2200	90	125.00	3000	100	160.00	4000	110	.....	....	...	.....	....	...
Federal Rubber Co. of Illinois, Cudahy, Wis.																							
Federal Cord	.....	.....	.....	46.50	48.50	57.50	59.00	60.50	75.75	2250	100	111.75	3000	110	143.75	4000	120	.....	....	...	.....	....	...
Firestone Tire & Rubber Co., Akron, O.																							
Firestone Cord, non-skid	17.50	32.40	34.25	44.00	46.10	54.75	56.10	57.50	82.65	2200	90	115.40	3000	100	148.70	4000	110	235.00	5000	120	.....	....	...
Gates Rubber Co., Denver, Colo.																							
Gates Cord, non-skid	15.25	28.55	29.40	30.75	37.70	47.65	.....	49.80	82.85	2200	90	115.70	3000	100	148.90	4000	110	.....	....	...	.....	....	...
General Tire & Rubber Co., Akron, O.																							
General Cord, non-skid	19.70	34.95	37.85	44.45	46.55	54.90	53.75	60.90	83.40	2000	90	116.30	3000	100	153.15	4000	110	239.95	5000	120	334.30	6000	130
Gillette Rubber Co., Eau Claire, Wis.																							
Gillette Cord, non-skid	18.30	32.50	34.50	42.70	44.85	53.20	.....	55.85	78.55	2200	90	113.85	3000	100	146.65	4000	110	.....	....	...	.....	....	...
Goodrich, B. F., Rubber Co., Akron, O.																							
Goodrich De Luxe Cord	.....	.....	.....	.....	.....	.....	53.50	.....	82.65	2200	90	115.45	3000	100	148.70	4000	110	.....	....	...	.....	....	...
Goodrich Silvertown Cord	18.00	32.40	34.25	41.90	43.90	52.15	.....	54.75	.....	....	...	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Goodyear Tire & Rubber Co., Akron, O.																							
Goodyear Cord, All-Weather Tread	16.25	32.40	34.25	41.90	43.90	52.15	53.50	54.75	85.75	....	...	119.70	....	...	154.25	....	...	249.85	....	...	346.40	....	...
Goodyear Rut Proof	.....	.....	.....	44.00	46.10	54.75	56.20	57.50	90.05	....	...	125.70	....	...	161.95	....	...	.....	....	...	.....	....	...
Goodyear Cross-Rib	13.50	25.45	27.35	31.45	32.95	39.10	40.60	41.05	64.30	....	...	89.80	....	...	115.70	....	...	.....	....	...	.....	....	...
Gordon Tire & Rubber Co., Canton, Ohio																							
Gordon Triangle Cord, non-skid	18.00	32.50	34.50	42.70	44.85	53.20	.....	55.85	90.00	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Hewitt Rubber Co., Buffalo, N. Y.																							
Hewitt Cord, non-skid	18.75	32.40	34.25	41.90	43.90	52.15	56.00	57.50	82.65	2200	90	115.40	3000	100	.....	....	...	.....	....	...	.....	....	...
Howe Rubber Corp., Inc., New Brunswick, N. J.																							
Howe Ultra Cord, non-skid	24.75	33.10	35.45	42.25	44.20	52.00	53.20	54.30	85.00	2200	90	120.00	3000	100	.....	....	...	.....	....	...	.....	....	...
India Tire & Rubber Co., Akron, O.																							
India Cord, non-skid	19.95	34.90	37.10	42.30	44.40	52.70	56.50	55.40	83.75	2200	90	118.90	3000	100	151.90	4000	110	.....	....	...	.....	....	...

Iowa Cord Tire Co., Inc., Des Moines, Ia.																						
Iowa Cord, non-skid	17.85	29.93	31.68	36.77	38.57	45.79	.....	48.02	68.21	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Kelly-Springfield Tire Co., New York, N. Y.																						
Kelly-Springfield Cord, Kant Slip	18.95	32.75	34.95	42.40	44.30	52.30	.....	54.40	90.90	2200	90	121.50	3000	100	157.50	4000	110	.....	....	...	.....	....	...
Kenyon Co., Inc., Brooklyn, N. Y.																						
Kenyon Cord, non-skid	17.50	31.50	33.50	38.50	41.50	52.15	.....	54.75	80.00	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Keystone Tire & Rubber Co., New York, N. Y.																						
Keystone Cord, non-skid	19.90	32.90	34.90	41.90	44.85	52.90	54.40	54.75	82.90	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Kokomo Rubber Co., Kokomo, Ind.																						
Kokomo Cord, non-skid	18.00	32.40	34.25	46.10	48.30	57.35	.....	60.25	81.30	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Lee Tire & Rubber Co., New York, N. Y.																						
Lee P. P. Cord	24.75	44.25	46.60	54.25	56.75	64.50	66.25	67.75	98.50	1970	90	135.05	2720	100	173.75	3595	110	.....	....	...	.....	....	...
McClaren Rubber Co., Charlotte, N. C.																						
Autocrat Cord, non-skid	18.75	32.50	34.50	42.80	44.85	53.20	54.85	55.95	82.65	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
McGraw Tire & Rubber Co., Cleveland, Ohio																						
McGraw Cord, rib or non-skid	18.00	32.40	34.25	41.90	43.90	52.15	.....	54.75	78.05	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Madison Tire & Rubber Co., Inc., Buffalo, N. Y.																						
Madison Oversize Cord	21.00	36.90	38.20	45.75	48.00	57.00	.....	60.00	90.00	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Majestic Tire & Rubber Co., Indianapolis, Ind.																						
Majestic Cord, non-skid	26.35	37.65	39.85	42.55	44.70	53.00	.....	55.70	91.85	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Marathon Tire & Rubber Co., Cuyahoga Falls, O.																						
Marathon Cord, non-skid	19.90	32.40	34.25	41.90	43.90	52.15	53.50	54.75	82.65	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Mason Tire & Rubber Co., Kent, O.																						
Mason Cord, non-skid	15.80	24.50	25.35	30.75	32.40	38.95	.....	39.95	.....	....	...	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Mellinger Tire & Rubber Co., Kansas City, Mo.																						
Mellinger Cord, non-skid	18.00	32.40	34.25	41.90	43.90	52.15	.....	54.35	90.90	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Michelin Tire Co., Milltown, N. J.																						
Michelin Cord, non-skid	16.90	33.35	35.50	42.60	44.75	53.75	55.50	56.40	86.00	....	...	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Mid-Continent Tire Mfg. Co., Wichita, Kans.																						
Midco Cord, Universal	22.00	38.75	41.15	45.45	47.50	49.25	.....	59.00	92.50	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Miller Rubber Co., Akron, O.																						
Miller Cord, "Geared-to-the-Road"	19.00	32.40	34.25	41.90	46.95	52.11	53.50	57.50	78.05	2200	100	113.85	3000	110	146.65	4000	120	236.25	5000	130	330.00	6000	140
Mohawk Rubber Co., Akron, O.																						
Mohawk Cord, non-skid	26.50	34.10	36.10	44.10	46.20	55.00	56.50	59.50	87.00	2200	90	121.50	3000	100	156.50	4000	110	.....	....	...	.....	....	...
Norwalk Tire & Rubber Co., Inc., Norwalk, Conn.																						
Norwalk Cord, non-skid	.....	.....	.....	.....	.....	.....	52.55	57.20	75.00	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Pennsylvania Rubber Co., Jeannette, Pa.																						
Pennsylvania Cord, non-skid	21.40	29.25	31.05	37.70	39.55	47.00	.....	49.30	76.45	2200	90	95.35	3000	100	134.95	4000	110	.....	....	...	.....	....	...
Perfection Tire & Rubber Co., Fort Madison, Ia.																						
Perfection Cord, non-skid	19.50	32.40	34.25	41.90	43.90	52.15	53.50	54.75	90.90	2200	90	121.50	3000	100	157.50	4000	110	.....	....	...	.....	....	...
Standard Fabrics	13.75	25.45	27.35	34.05	36.25	42.15	.....	44.75	.....	....	...	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Powertown Tire Corp., Rochester, N. Y.																						
Powertown Cord, non-skid	23.30	39.10	41.00	49.70	53.10	61.00	62.20	63.20	95.90	2200	90	128.25	3400	100	.....	....	...	.....	....	...	.....	....	...
Quaker City Rubber Co., Philadelphia, Pa.																						
Quaker City Cord, non-skid	28.50	32.40	34.25	41.90	43.90	52.15	.....	54.75	85.00	2200	90	115.50	3000	100	.....	....	...	.....	....	...	.....	....	...
Quaker City Fabric, non-skid	15.75	24.95	26.85	33.40	.....	.....	.....	.....	.....	....	...	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Racine Rubber Co., Racine, Wis.																						
Racine Multi-Mile Cord	18.85	33.45	35.40	43.25	45.35	53.85	54.40	56.60	77.45	2200	90	112.35	3000	100	144.75	4000	110	.....	....	...	.....	....	...
Republic Rubber Co., Youngstown, O.																						
Republic Cord, non-skid	19.00	33.75	35.85	44.35	46.60	55.25	.....	58.00	82.65	2200	90	115.45	3000	100	148.70	4000	110	.....	....	...	.....	....	...
Samson Tire & Rubber Corp., Los Angeles, Calif.																						
Samson Super Size Cord, non-skid	18.90	33.90	35.85	49.40	52.60	61.50	63.80	65.70	85.00	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Sprague Tire & Rubber Co., Omaha, Neb.																						
Sprague Cord, non-skid	.....	32.50	34.50	41.90	44.30	52.15	.....	54.75	90.90	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Spreckles "Savage" Tire Co., San Diego, Cal.																						
Spreckles Savage Cord	.....	35.50	37.80	46.80	48.00	57.40	.....	60.00	90.00	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Standard Four Tire Co., Keokuk, Iowa																						
Standard Cord, non-skid	18.90	32.50	34.50	42.70	44.85	53.20	.....	55.85	85.00	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Standard Tire Co., Willoughby, O.																						
Tiger Foot, non-skid	18.00	32.40	34.25	41.90	43.90	52.15	.....	54.75	82.65	2200	90	115.45	3000	100	.....	....	...	.....	....	...	.....	....	..
Sterling Tire Corp., Rutherford, N. J.																						
Sterling Sovereign Cord	23.50	32.40	34.25	41.90	43.90	52.15	.....	54.75	86.80	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
Swinehart Tire & Rubber Co., Akron, O.																						
Swinehart Cord, non-skid	20.00	35.20	37.25	45.55	47.70	56.70	55.00	59.50	82.80	2200	90	115.65	3000	100	.....	....	...	.....	....	...	.....	....	...
Syracuse Rubber Co., Inc., Syracuse, N. Y.																						
Syracuse Syra-Cord, non-skid	18.30	32.50	34.50	42.45	44.0	52.85	54.00	55.50	78.55	2200	90	113.85	3000	100	146.65	4000	110	.....	....	...	.....	....	...
Thermoid Rubber Co., Trenton, N. J.																						
Thermoid cord, non-skid	.....	33.05	34.95	42.75	44.80	53.20	54.60	55.80	84.30	2200	90	117.70	3000	100	.....	....	...	.....	....	...	.....	....	...
Traveler Rub. Co. of Bethlehem, Bethlehem, Pa.																						
Traveller Cord, non-skid	19.60	32.40	34.25	41.90	43.90	52.15	.....	54.75	83.60	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	...
United States Tire Co., New York, N. Y.																						
United States Cord, non-skid	.....	.....	.....	.....	47.25	.....	54.10	58.90	78.55	2200	90	113.85	3000	100	146.65	4000	110	.....	....	...	.....	....	...
Victor Rubber Co., Springfield, Ohio.																						
Victor Cord, non-skid	19.00	34.10	36.05	41.90	43.90	52.15	53.50	54.75	82.65	2200	90	.....	....	...	.....	....	...	.....	....	...	.....	....	..

NEW COMMERCIAL CARS

"Republic Road Builder" for Highway Construction

THE 1922 road-building program, the largest ever undertaken, still continues to make large demands upon various industries. One of them has been the demand for faster and more efficient transportation equipment in order that projects under way may be completed on schedule and with greatest possible economy.

To help meet this demand for specialized equipment, the engineering staff of the Republic Sales Corp., has designed a job known as the Road Builder Truck, specifically adapted to the requirements of contractors using latest methods of concrete highway construction.

In order to provide the maneuvering ability, so essential in negotiating over sub-grades, the chassis was built with a wheelbase of 110 in. This permits a turning radius of 15½ ft. Tire equipment is pneumatic. The carburetor is equipped with a special air cleaner to prevent dust and grit from being carried into the engine cylinders. A vacuum gasoline system assures steady flow of fuel to the last drop, and a special low gear ratio enables the truck to negotiate sand and mud roads without difficulty.

The body is mounted comparatively low to the ground, and is well balanced over the rear axle, with approximately 40 per cent of the total load carried on the front wheels.

Three designs adaptable to the various methods of construction in use by road contractors have been worked out. All are of 2 cu. yd. capacity.

The standard rear discharge type is fitted with an under-body hydraulic hoist, and a center, swinging partition, controlled by the driver. This body is intended for use in connection with a central proportioning plant. The operation of dumping takes but a few seconds.

Pneumatic tires are used so as not to break up the sub-grade, as would be the case were solid tires used.

For the wet mix system, where the sand, gravel and cement are mixed first and then carried to the road slab, a different type of body is furnished with the Republic Road Builder. This body comprises two gravity end dump hoppers, each having a capacity of one cu. yd. and designed especially to handle a wet mixture. Each hopper may be dumped instantaneously by the driver without leaving his seat. By pulling a lever, the hopper is released and the weight of the load automatically dumps the body, which is built on a radius with the center of gravity behind the pivot center. After the load is dumped, the hopper is tipped back by hand and automatically locks itself.

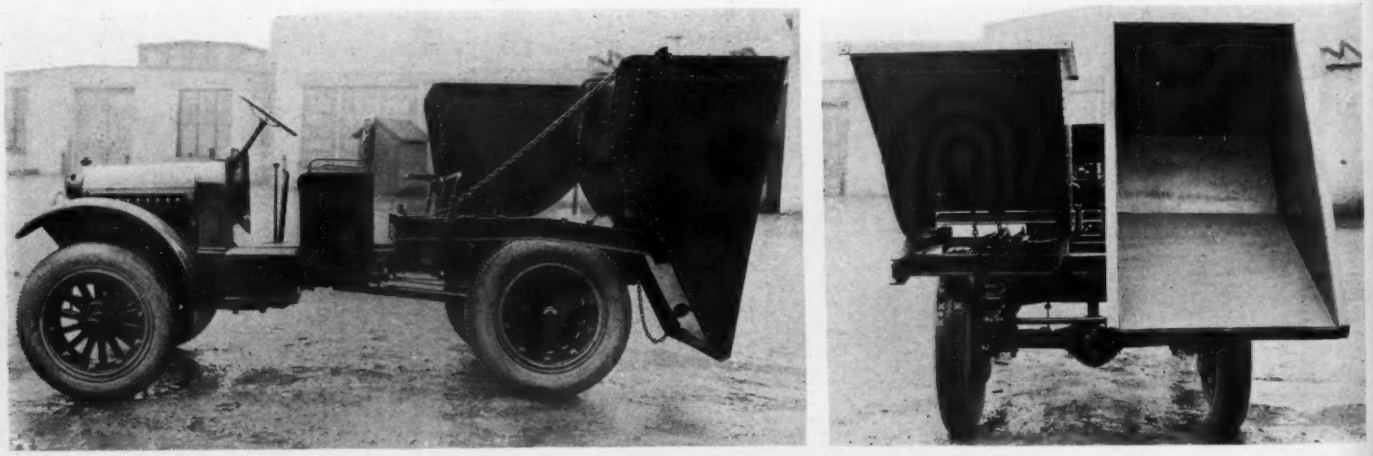
A third body option provides for mounting two batch boxes of one cu. yd. capacity, so that contractors may use existing equipment if preferred.

Dorris Brings Out New One-Tonner

A NEW one-ton Dorris truck was officially announced recently by the Dorris Motor Car Co., St. Louis, Mo. This new model, known as the K-2 series, is empowered by a 4 x 5½ in., four-cylinder, valve-in-head engine of Dorris make. It is mounted in unit with the clutch and transmission. A device which is claimed to completely vaporize the present day low grade of gasoline and which is being used on Dorris passenger cars, is now being installed as regular equipment on this K-2 truck. It is known as the Dorris Distillator. Economy in gas conservation is exacted through employment of this device. The truck is claimed to average from 12 to 15 miles to a gal. of gas. Three options in wheelbase are extended the owner. The choice includes 120, 132 and 144 in. Semi-elliptic springs, all of which are of chrome vanadium steel, are used both in the front and rear, the latter being underslung.

A brief outline of the units and their specifications follow:

The N. A. C. C. horsepower rating of the engine, which is mounted on the three-point suspension principle, is 25.6. The crankshaft of this engine revolves in five large main bearings, all of which together with the connecting rod bearings are 2¼ in. in diam. Heavily ribbed Lynite aluminum is the material used in the crankcase. Engine lubrication is full pressure.



Two Views of the New Republic Road Builder With Dual Hoppers

Left: View showing one hopper at full dumping position. Right: Rear view, showing one hopper approaching a full dumping position

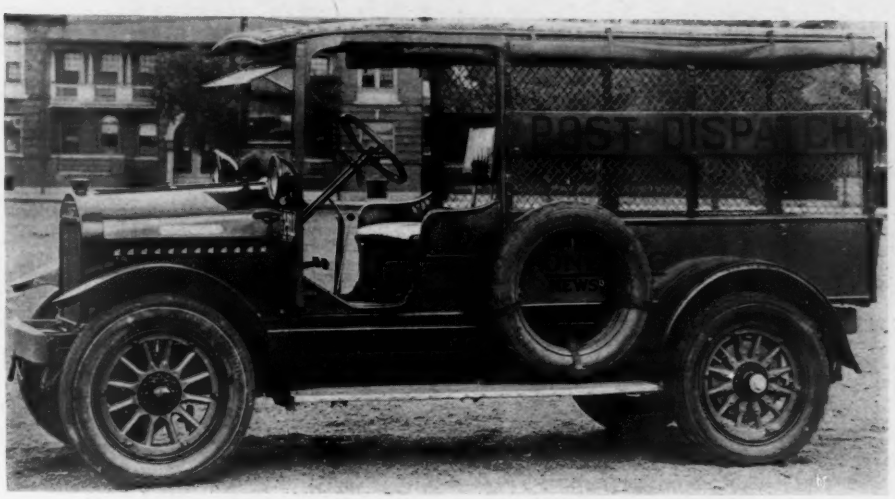
From the engine power is carried back through a multiple-plate, dry-disk clutch to a sliding gear transmission, providing three speeds forward and one reverse.

Ignition is provided by a Bosch DU-4 straight high-tension magneto with flexible coupling and the carbureting system includes a Stromberg M-2 carburetor, aided by a Dorris Distillator and an 18-gal. gasoline tank mounted under the driver's seat.

The radiator is copper tubular, with special core and shell permitting easy demounting of core by the removal of four bolts. The radiator shell is cast aluminum.

From the transmission the power is transmitted through a propeller shaft equipped with two Thermoid-Hardy universal joints to a Timken bevel-gear rear axle providing a gear ratio of 4 3-13:1. The front axle is a Timken of the conventional I-beam section. The brakes are of Duplex make, having drums 15 in. in diam. by 3 in. face. They are Raybestos lined. Left hand drive, center control; spark and throttle under steering wheel, and foot accelerator. A Ross worm and solid nut type steering gear is used. Wheels are of the wood artillery type and are equipped with 33 x 5 cord truck pneumatics.

The electrical equipment includes: 6-volt, 130 amp. hr. storage battery, Westinghouse starting motor, Westinghouse self-contained generator, Klaxon horn, electric side and tail lights, switches, etc. Equipment includes a complete set of tools, extra rims, speedometer mounted on dash and driven by transmission.



New One-Ton Truck Recently Brought Out by the Dorris Motor Car Co. It is Known as the K-2 Series and Possesses Special Features

Fast Express Model Federal's Latest Entry

IN keeping pace with the demand for light capacity, express trucks for which there is a larger percentage demanded than all other capacity trucks combined, the Federal Motor Truck Co., Detroit, Mich., recently announced a new "delivery type" truck to help accommodate this demand. It has been named the Federal Fast Express, Model R2, and is, according to its builders, capable of carrying a reasonable load up to the limit of its 5-in. cord tire capacity, at a speed of 35 m.p.h.

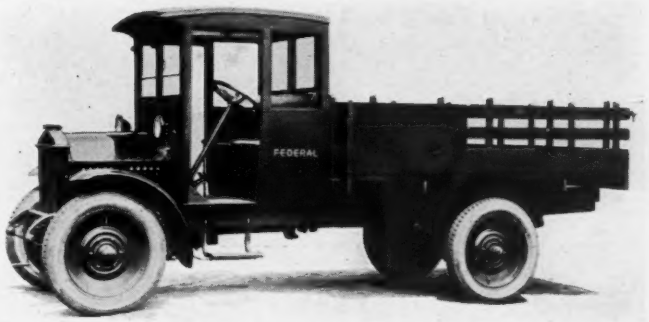
This truck has a chassis weight of 2950 lb., body allowance of 900 lb., and with a one-ton load, a total road weight of 5850 lb. Its wheelbase is 132 in., tread, 56 in., and loading space back of seat, 110 in.

The power plant is a Continental, J-4, 3¾ x 5-in engine. Lubrication is force feed. The cooling system includes a centrifugal water pump. An adjustable heated exhaust manifold for summer and winter driving is provided.

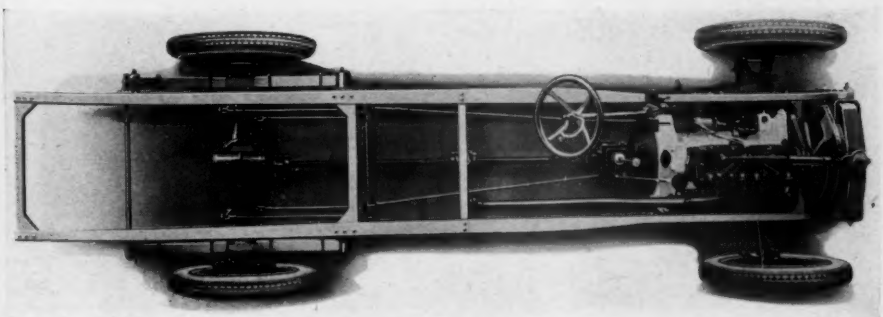
Final drive is Timken worm and worm wheel, which is similar to the rear end assembly of all Federal models. In addition to the above mentioned units, the Federal Fast Express includes such components as Eisemann magneto, Zenith carburetor, Oakes fan, Long radiator core in heavy pressed steel shell, Borg & Beck clutch, Detroit Gear and Machine transmission, Peters universal joints, Gemmer steering gear, Stewart-Warner vacuum tank, Disteel wheels, U. S. Royal cord tires, Alemite chassis lubrication, Remy starter and generator, and Exide battery. Other features are chrome-vanadium steel springs, adjustable electric lights, mounted out of the way of the dash, electric horn, pressed-steel dash and two running boards.

The Federal Company has made arrangements to furnish any style of body mounted and painted ready for service. In all, thirty-two different combinations of seats, bodies, windshields, and cabs have been worked out to fill practically every need of express or delivery work. Many of the combinations are interchangeable on the same body with the same top.

Before production was started on this model the factory was subjected to some changes to permit of quantity production.



This New Federal Fast Express Model is Described as a Strict Delivery Type Job, Capable of Carrying Its Maximum Capacity at a Road Speed of 35 M.P.H.



Overhead View of Federal Chassis, Showing Balanced Disposition of Components

Bringing the Van Dorn Plant Home to You, is a unique folder just issued by the Van Dorn & Dutton Co., gear manufacturer at Cleveland. The pamphlet contains a detailed description of a trip through the gear plant and other interesting information. Free on request.

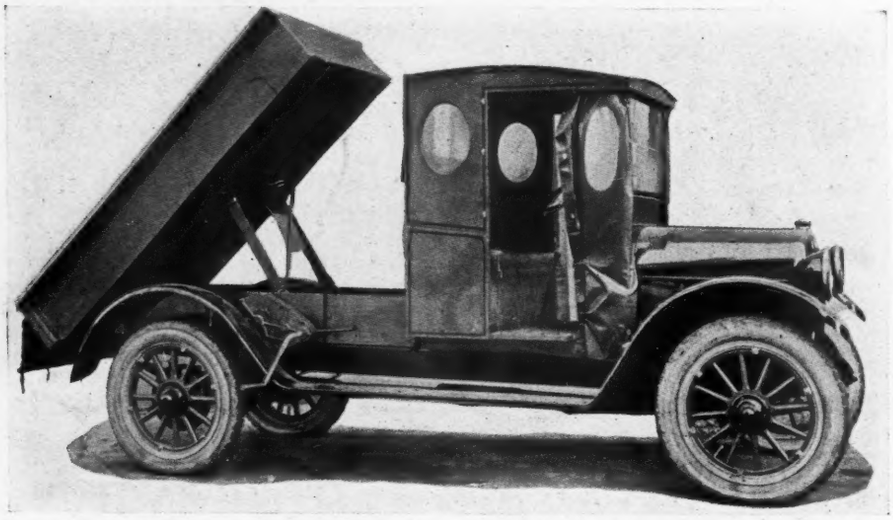
New Woonsocket Hand and Power-Operated Hoist and Body

A NEWLY designed hand and power operated hoist and body, constructed along lines somewhat apart from the conventional, is now being produced by the Woonsocket Mfg. Co., Woonsocket, R. I.

The body has a mechanical hoist and is particularly adaptable to the Reo Speed Wagon chassis. Operation of the body is simple, claim being made that it can be dumped in one-half a minute by hand.

Double acting tail-gate attachments for use with the combination body are furnished. In addition, the hoist may be obtained with a rear elevating attachment for use in connection with coal deliveries. This attachment will permit the shooting of coal over a distance of from 12 to 15 ft.

The standard body is built 8 ft. long, 4 ft. 6 in. wide, and 11 in. high with a 4 in. wing. It is built exceptionally low, as the illustration indicates, making it adaptable to a variety of work. This equipment is also furnished with a power attachment controlled directly from the driver's seat. The operation of it is such that the body can be held in any position required without brakes, or the driver leaving the seat. No space is taken over by the hoist behind the driver's seat as may be noted. Special bodies of any type can be attached to this equipment. The manufacturer asserts that another feature is the low price of this equipment.



Reo "Speed Wagon" Completely Equipped With the New Woonsocket Hand and Power Operated Hoist and Body

Doors of the single swing type are used on both sides and double type on the rear. The doors in the rear compartment are fitted with all steel cremorn bolts locking the top and bottom. The doors in the driver's compartment are locked with a single sliding bolt. Yale locks are used throughout and no handles are provided on the outside of the doors. Windshield and window sashes are fitted with "bullet-proof glass."

Between the driver's seat and the rear compartment a steel plate partition is furnished. This is perforated with ¾-in. round holes permitting communication between occupants of each compartment, without offering access for tampering with locks or contents of the rear compartment.

Openings in the rear compartment are fitted with grills made of ½-in. square bars, although adjustable louvers can be supplied if preferred. When grills are used sliding steel shutters are provided. Another feature is the rear wheel fender. The fenders are built with a special contour so as to prevent anyone from gaining a foothold and riding on the outside of the body. The steps provided under the doors are of the folding type, and are covered by a guard fastened to the doors. Interior lighting is furnished by a dome light provided in the roof of the rear compartment. Special emergency equipment is supplied if desired with connections in the rear compartment to stop engine and an emergency brake lever to stop car in case of injury to the driver.

Thermoid Opens Kansas City Branch

The Thermoid Rubber Co., Trenton, N. J., has opened a branch in the Lathrop Bldg., Kansas City, Mo., to care for sales within the states of Missouri, Kansas, North and South Dakota, Montana, Nebraska, Wyoming, Colorado, Oklahoma, Arkansas, Texas, and the northern portion of Louisiana.

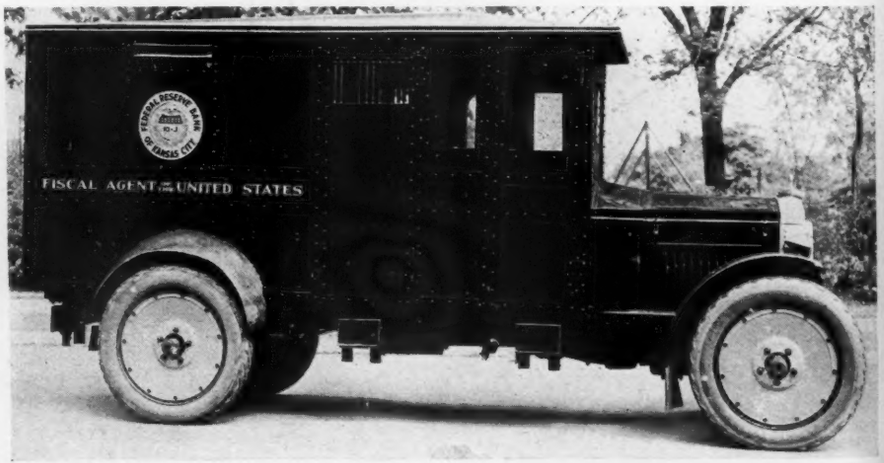
H. J. Campbell, formerly middle western representative for many years, has been appointed district manager of the new branch and will resume his duties immediately.

National Armored Body for Banks

THE National Steel Products Co., Kansas City, Mo., is building armored bodies for banks and financial institutions designed to fit all standard makes of trucks and speed truck chassis. In describing its product the company calls attention to the fact that the special design and careful construction of these bodies preclude any possibility of rattle or vibration. Furthermore, the claim is made that no "booming" nor any other objectional sound is produced by these bodies.

Various types are offered; either lined or unlined; seats for guards in the rear compartment, optional; and provision for supplementary ignition switch and extra emergency brake are also optional.

The frame work of the body is of angle steel and "T" iron. All joining of the 3/16 in. steel side plates is covered with steel splice plates. The flooring is of No. 8 steel plate in one piece, the edges of which are bent down and riveted to the side plates. The plain arched roof, which extends the full length of the body and beyond the windshield forming a visor, is supported on steel rafters and securely fastened to prevent vibration.



Provisions for Protection and Defense Against Burglary Make This Job a Veritable Steel Vault on Wheels

TRUCK EQUIPMENT AND APPLIANCES

Dayton Offers the Dual Pneumatic Cast-Steel Wheel

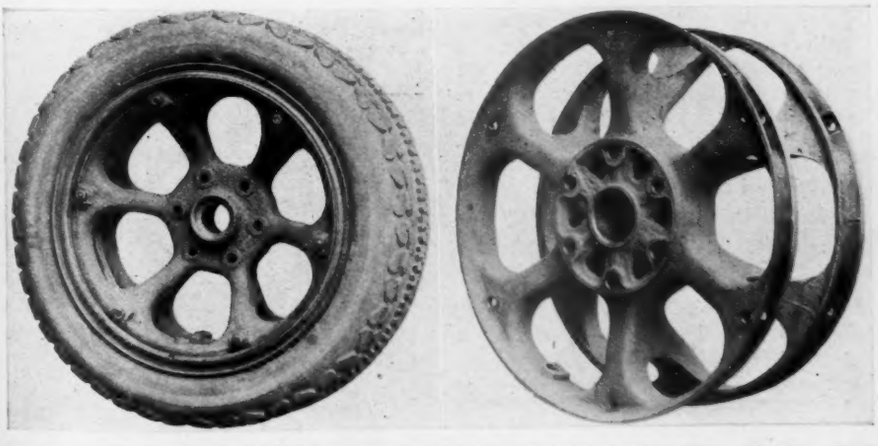
During the early years following the first use of motor trucks as a means of transportation, engineering skill was focused upon the engine and the chassis. Naturally, therefore, the great developments of the industry came through improvements and refinements in the engine. Wheels were considered to be of minor importance. Then with the search for reduction of costs and increase in efficiency, wheels, as well as other units previously considered of minor significance, were put under rigid analysis in an endeavor to improve them.

As early as 1905 steel wheels came in for their share of engineering study. At first many problems confronted the engineers and hindered progress, but these expected obstacles gradually succumed before the persistent diligence of the engineers. The main difficulty in the production of a practical steel wheel lay in the working out of a design that would give a resilient wheel and a steel that would have the requisite limit of elasticity. This problem, after years of exhaustive research, was solved by George Walther, who worked out the suspension principle in design and the grade of steel that combined the greatest strength with the desirable qualities of lightness and resiliency. This wheel became known as Walther's wheel and was put on the market as the Dayton Steel Wheel, so called because his factory was located in Dayton, Ohio.

These wheels are cast from electric furnace steel. The spokes are hollow and arch into the rim in accordance with the suspension principle of design. There is no break in the texture of the steel.

The latest addition in the Dayton Steel Wheel family is known as the Dual-Pneumatic cast steel wheel. It is made for trucks ranging from ¾ ton to 2 ton. As in the other types the spokes, hub and rim are cast integral, but differs in that each wheel has two rims with a center distance of 8 1/16 in. It is designed for either a 34 x 5 or a 36 x 6 tire. This wheel is constructed from furnace steel and weighs about 100 lb. without rims.

An important feature of design in the Dayton wheel is that the hub is an integral part of the wheel itself and that both the rim and hub are machined in one operation. This latter feature insures an absolutely true running wheel. On each wheel the rim itself and the rim fittings are a complete and separate unit. Thus the mounting of the tires is the same as for an ordinary wheel, except that two tires are mounted instead of one.



Standard Rims of Any Make Can Readily be Fitted to the New Dayton Dual Pneumatic Steel Wheel. Note Design and Hollow Construction

Gier Blocks Reduce Shipping Hazard

A number of truck and car manufacturers have adopted a new method of fastening down automobiles for shipment by rail from factory to dealer. By using Gier steel loading blocks, manufactured by the Motor Wheel Corp., Lansing, Mich., instead of the wooden equipment formerly employed for this service, these manufacturers have reduced loading and unloading time and costs considerably, and at the same time have made their shipments more secure from possible damage while in transit. Gier blocks are returned by the distributor or dealer and used over and over again indefinitely.

Gier Blocks in Position, Bracing Front Wheels of Vehicle Being Shipped

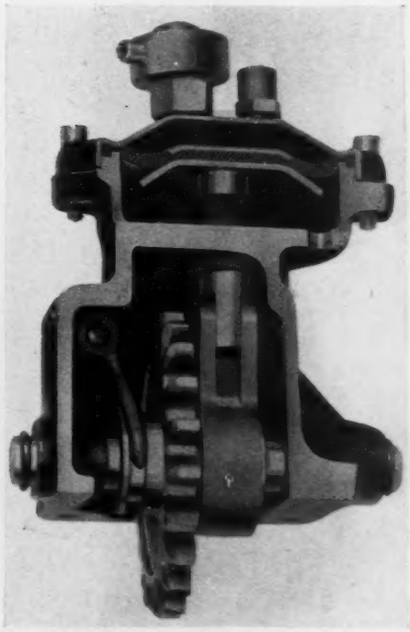
In a recent test, a car of automobiles anchored with Gier blocks was kicked against a string of 13 empty box cars with all brakes set at a speed of 25 miles an hour. The couple draft timber and the whole end of one box car were broken by the teriffic impact, but the Gier blocks held the automobiles securely and without the slightest damage.

The Gier blocks are 10½ in. high and stamped from No. 10 gage, blue annealed, pickled, oiled and limed stock. They weigh 10 lb. each and can be nested and returned to the factory by the car dealer in bundles by fourth-class rating.

These Gier blocks average one and a half trips a month at an average return cost of 40c per set of eight. Each is stamped with the automobile manufacturer's name to prevent loss in transit.

New Motor Driven Tire Pump

A new motor driven tire pump suitable for transmission or other type of installation in which it is claimed that the air chamber requires no oil has been brought out by the Detroit Carrier and Mfg. Co., Detroit. It is of the diaphragm type.



New Motor-Driven Tire Pump

The diaphragm is driven off the pump shaft by a crank and connecting rod arrangement. The pumping is effected by the reciprocation or pulsation of the diaphragm. Because of this construction no lubrication is required.

The assembly of this pump is such that replacement of the diaphragm is a simple matter. The pump consists of but few moving parts.

Two American Automotive Machinery Service Station Products

Included in the line of the American Automotive Machinery Co., Chicago, Ill., makers of equipment for reducing the factors of time, labor and money in the rendition of repairs and service in repair shop or service station, are the boring machine and the grinding and polishing machine.

This boring machine, which will bore the cylinders without removing the block from the chassis, can be mounted in correct and positive alignment of the cylinders in not in excess of five minutes. It will accommodate the size of any make engine.

The reversible D. C. or A. C. electric motor of 1-3 hp. with which this machine is equipped allows the boring bar to travel downward or upward in the cylinder. The boring bar carrying the cutter block can be readily removed from the threaded feed-bar, allowing rapidity in adjusting the alignment for boring the cylinders.

This machine not only requires but one man for operation, but requires very little attention while operating as well. The electric motor is equipped with an emery wheel for keeping the cutting tools in proper condition. Any part of this machine wearing out or breaking can readily be replaced. Besides, all parts are standardized and interchangeable.

This Machine is Designed to Bore Cylinders Without Removing Block From Chassis.

The grinding and polishing machine, an illustration of which is shown herewith, is equipped with an automatic oil feed for the feeding of the grinding compound and can be adjusted to feed any amount required.

The illustration shows the grinding sleeve of this machine in position in the cylinder set for operation. This sleeve is of high grade steel and is stated to automatically carry the grinding compound to every portion of the cylinder walls.

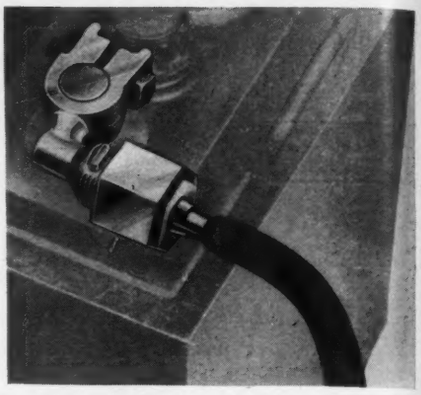
In view of the three distinct grinding activities of the sleeve in one revolution of the eccentric wheel it is claimed that the cylinder walls can first be grinded with course compound and then polished with finer material into perfect condition no matter what the condition, whether scored or worn elliptical.

American Automotive Machinery Company's Grinding and Polishing Machine.

The length of the stroke of the grinding sleeves can be adjusted on the eccentric wheel to give a travel of from three to six inches or any fraction thereof. The grinding sleeves of this machine are claimed to automatically take their true alignment, after which the machine can be locked rigidly in its true position. This machine will grind to less than one-thousandth of an inch.

Linx-Tite Solderless Battery Connection

The Ford Solderless Lug Co., Mfg., Dallas, Tex., is distributing through the Marvel Sales Co., 2011 Main St., Dallas, Tex., the Linx-Tite Solderless Battery Connection, which is claimed not to corrode around the posts, to be adjustable to all sizes of cables, and easily and quickly attached.



Linx-Tite Solderless Battery Connection

Both positive and negative are made in rights and lefts, and in the cone type. A leaded threaded battery bolt is used to clamp the connection to the battery post.

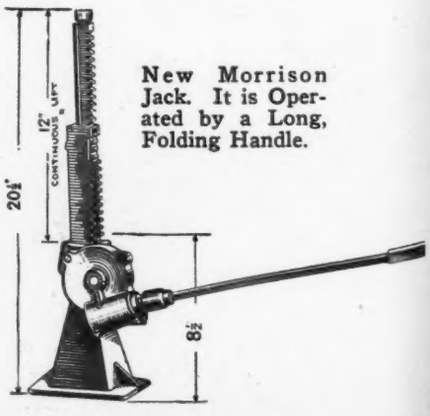
Morrison Automatic Double Range Continuous Lift Jack

The Woods Engineering Co., Alliance, O., is manufacturing a new jack, which is entirely new in principle, construction, operation and compactness. It is made in four sizes ranging in lifting capacity from 2 to 8 tons and designed to fulfill the demands for all motor vehicles from the light passenger car to the heaviest truck. Its high lifting range extends from 11¼ to 14 in.

This jack is placed in position, raised, lowered, and removed by a long folding handle, all these movements being accomplished from a standing position.

It is entirely constructed from steel and malleable iron. The base including the gear housing is a one-piece malleable casting. Gear and rack bars are constructed of alloy steel of special analysis. All rack bars and gear teeth are machine cut. Reduction of friction to a minimum and insurance of perfect mesh at all times are two of its constructional features. Ball bearings are used on the thrust end of the driving worm.

Nos. 3 and 4 are for medium and heavy capacity trucks respectively. Their specifications are as follows: Weight, 16 and 32 lb.; 8½ and 9½ in. high folded; 20½ and 23½ in. high extended; 12 and 14 in. continuous lift; 4½ and 8 tons capacity; and $12.50 and $25 list price.



New Morrison Jack. It is Operated by a Long, Folding Handle.

Rub-Tex Compartment Battery Box

In the manufacture of the Rub-Tex Compartment Battery Box, manufactured by Rub-Tex Products, Inc., 1402 N. West St., Indianapolis, Ind., a special rubber compound, specially developed methods of building, and an entirely new curing process, are used, resulting, it is stated, in high tensile strength, super insulating

Special Compound Battery Box

quality, and an acid proof as well as foolproof construction. It is guaranteed not to break, leak or freeze in battery use for two years.

This box is made in three types with cell sizes as follows: Type 6-11—depth, 7 3-16 with ¾ in. bridge; length, 5 31-32; width, 2 7-16 in. Type 6-13—depth, 7 3-16 with ¾ in. bridge; length, 5 31-32; width, 2 13-16 in. Type 12-7—depth, 7 3-16 in. with ¾ in. bridge; length, 5 31-32 in.; width, 1½ in.

Improved Dover Measures

The Dover Stamping & Mfg. Co., 385 Putnam Ave., Cambridge 39, Mass., has made some improvements in its line of Dover Perfected Measures. One feature is the new right angle positive filling edge designated as Feature No. 1 in the illustration. This is the point to where the measure should be filled. Feature No. 2 is a new lip around the top so that the

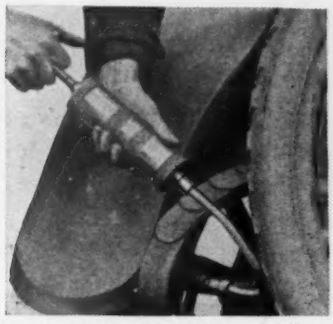
This Improved Measure Contains Two New Features

measure can be filled to full capacity and carried without spilling. The Dover line of measures conforms to the laws of all states.

Allpressure Lubricating System

The Allpressure lubricating system made by the O. K. Mfg. Co., 40 Potomac St., Dayton, Ohio, consists of a gun and various ball check fittings for lubricating different parts of the car. The gun is made of seamless brass tubing, knurled to prevent turning in the hands, and holds a large quantity of grease. Attached to it is a 15-in. flexible steel hose fitted with a square coupling.

Each ball check fitting of this gun is equipped with a square head, so that when

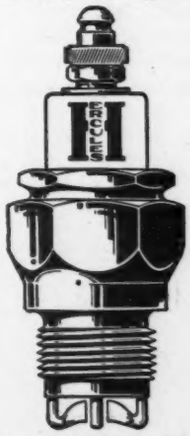


Discharge Lubricant With an Allpressure Gun

the square lock coupling of the hose is placed on the fitting and turned slightly to the left or right, the square holds it so that it cannot be pulled off until released with a quarter turn by the hand. The gun fits conveniently in any tool box.

Hercules Spark Plugs

The new Hercules Mogul type of spark plug developed and placed on the market by the Eclipse Mfg. Co., Indianapolis, Ind., is described as the latest advance in spark plug construction and claimed to operate efficiently on any grade of fuel in tractor, truck, passenger car, etc. Reduction of size and weight and to secure a functioning which would meet the varied conditions of heat, oil, high compression,



Hercules Mogul Plug

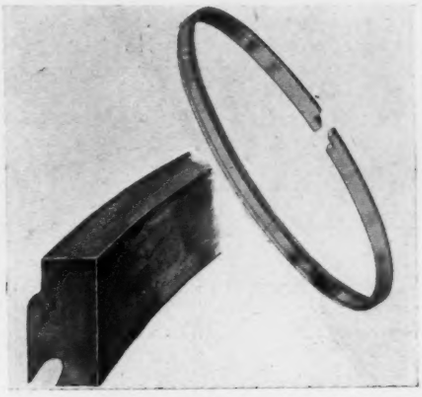
etc., were some of the features particularly sought by the designers of this plug.

The Mogul model averages about three inches overall length—is stocky in appearance and is finished in nickel and gun metal. The insulator is oversize and the porcelain shoulder more than the average thickness.

These plugs, except for the Junior size, a special model for Fords, lists at $1.

Oil King Piston Ring

Dygert & Siemers', Chamber of Commerce Bldg., Los Angeles, Cal., Oil King Piston Ring is described as a tough, close grained gray iron individually cast, step-cut, machined ring. A ball head on the top of the ring distributes oil evenly on the cylinder walls, while a cut above this ball head affords an oil seal sufficiently large to hold oil on the down stroke by



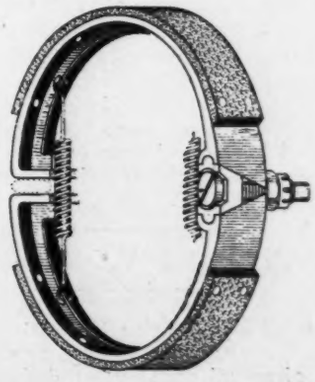
Sectional and Complete View of the Oil King Piston Ring

capillary attraction. Its narrow wearing surface is stated to insure quick seating. A centrifugal oil groove, at 45 degree angle, is said to present a shaving edge on the down stroke, giving the oil a centrifugal action back into the groove. This construction is also intended to keep the groove clean.

Prices: rings up to and including 4 in., $0.75; from 4 in. up to and including 5 in., $1. Made in all sizes and oversizes.

Stephens Adjustable Internal Brake Shoe

R. Stephens Co., 28 N. Clinton St., Chicago, Ill., is offering an adjustable brake shoe possessing an easy adjustment. This patented adjustment wears the lining to shaving thickness all around, and keeps the operating cam at the point of greatest leverage.

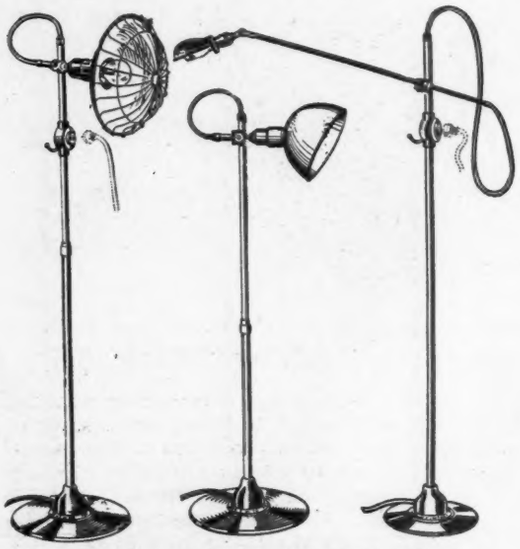


Readily Adjustable Internal Brake Shoe Put Out by Stephens

Its easy and accurate fit is said to facilitate installation. It is made of rolled steel, and has a two-piece extra heavy lining of asbestos, double wire woven.

White Adjustable Floor Portables

The O. C. White Co., 15-21 Hermon St., Worcester, Mass., in announcing its improved system for automotive service station lighting, known as White Floor Portables, states that because of the unrestricted adjustability of these stands the efficiency of the workman is increased. Adjustments can be made without attention to joints or fasteners, thereby affording an application of light to any desired point or working area. In addition to the increased workman efficiency these stands



Three Styles of White Adjustable Floor Portables, All of Which Are Featured Because of Their Complete Adjustability

are claimed to exact economies in the saving of time, reduction of current consumption, minimizing of lamp breakage and extension of cord maintainence.

A new and exclusive feature incorporated in this line of portables is that of bringing a plug outlet directly to work. This makes a convenient point of attachment for electrical tools, such as drills, soldering irons, vulcanizers, etc., to provide for a second lamp.

Equipment includes high grade electrical fittings; wired base with 20 ft. free cable, which is strong, oil, acid and water proof; and separable attachment plug.

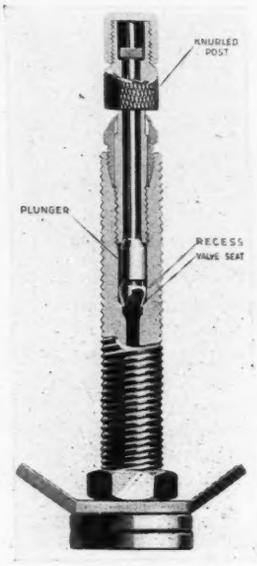
These portables are offered in six styles, three with and three without plug outlets. All prices are crated, f.o.b. Worcester, Mass. They range from $14.40 for style SP used for general shop work to $21.85 for style 2GPT, which is of the restricted flood lighting type.

All Metal Valve for Pneumatics

The All Metal Valve Co., 406 Kresge Bldg., Detroit, is the exclusive manufacturer of an all metal valve designed to retain high air pressure in pneumatic tubes. This valve, it is stated, is so constructed that, when closed, it will positively and indefinitely retain any degree of air pressure that may be desired.

The Holt valve "inside" consists of only three all metal parts and does not contain any springs or rubber parts, the efficiency of which may be impaired through deterioration. The valve also differs from the present automatic type of valve in that it does not depend on back pressure from within the tube for the maintenance of its air control seat, but is operated mechanically.

A recess in the lower end of the plunger makes that part sufficiently elastic to form a perfect seal without either seat being ground in. The makers point out that mechanical pressure absolutely overcomes any minute irregularity occurring in the metal faces.



Cutaway Showing the Inner Mechanism and Principle of the All Metal Valve

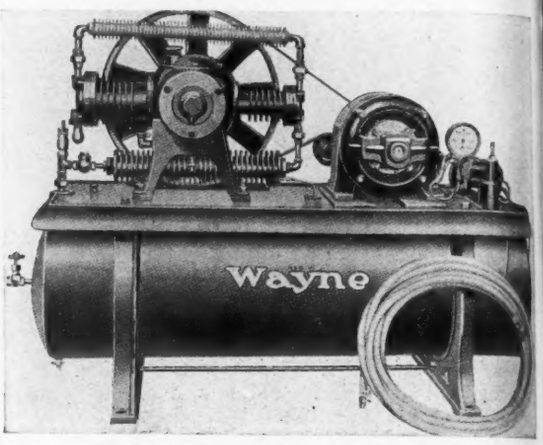
The valve is opened by turning the knurled post one and one-half turns to the left, in which position the plunger under back pressure acts as a check, preventing the escape of air while tire is being inflated. When the required degree of air pressure has been obtained, it is closed by turning the knurled post to the right until the plunger is seated.

Either the hand pump or air hose may be used for inflating and the pressure in the tire may be determined by the use of pressure gages which are now on the market. Its overall dimensions are standard with valves now in general use and it can be furnished for all sizes of pneumatic tubes, both for pleasure and commercial cars.

Wayne Two-Stage Compressor

The Wayne Horizontal Air-Cooled Two-Stage Air Compressor, manufactured by the Wayne Tank & Pump Co., Fort Wayne, Ind., is designed for use in filling stations, service stations, garages, tire shops and factories.

It is built in five models, all of which are stated to operate noiselessly, to run without vibration, and to be able to operate continuously against 200 lb. pressure without overheating. The lubricating system is automatic, positive and regulated. The various components are carefully de-



Wayne Introduces New Horizontal Air-Cooled Two-Stage Air Compressor

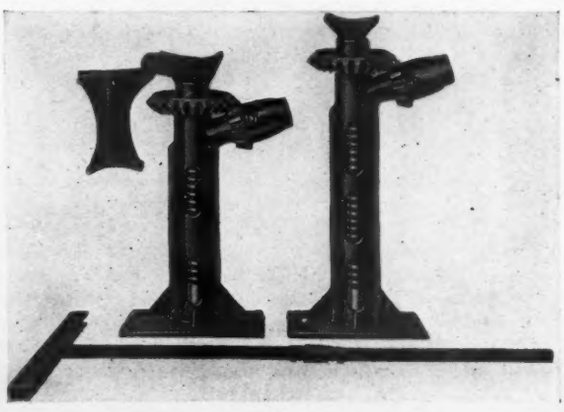
signed and assembled to afford accessibility and insure reliable and efficient operation. Each compressor carries a two-year guarantee against defective material or workmanship.

The standard motor is a repulsion induction type of single phase for use with AC current. If required, two or three phase motors can be supplied. The compound wound type of motor is supplied when used with DC current. The control is automatic, totally enclosed, and of the four-point contact type.

Drednaut Long-Handle Screw Jack

The Auto Specialties Mfg. Co., Saint Joseph, Mich., is manufacturing a new screw jack which is made in the long handle style. This construction is claimed to eliminate stooping. The 30-in. handle folds compactly, taking up but little room in tool box.

Drednaut Jacks are designed primarily for strength and durability. The base is broad and firm. Ease of operation and lifting capacity are the primary features of this new Drednaut Jack. Price with step, $3.50. Without step, $2.50.



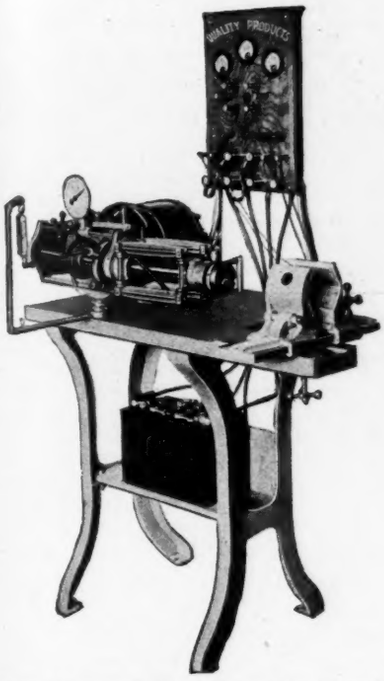
Two Drednaut Long-Handled Screw Jacks. Power and Ease of Operation Are the Two Dominating Features.

Service Station and Repair Shop Appliances

Q. E. P. Type T. D. No. 4 Universal Test Bench

The Quality Electrical Products Co., 915 E. 15th St., Kansas City, Mo., is offering the Type T. D. No. 4 Universal Test Bench, which is completely equipped to take care of any electrical test that may come up in the daily run of activities in any electrical service shop.

The panel equipment of this test bench includes a 30-0-30 ammeter; 600-0-600 ammeter; 0-30 voltmeter; single pole, double throw, knife switch; two three-point spark gaps, complete with terminal leads and clips; binding posts and leads to the test generators; heavy cables and terminals for testing motors; battery terminals, leads and binding posts for connecting 12-volt battery to board.



This Universal Test Bench is Stated to Take Care of Any Electrical Test

The heavy-duty type, A. C. or D. C. 1 hp. motor has a single unit friction head mounted on a one-piece casting direct to the motor-frame, giving speed variation up to 3600 in either direction. Its speed indicating dial is a built-in unit. Pressure regulation is by thumb nut through Norma ball thrust bearings, mounted on hub of friction disk. Pressure is automatically relieved when the driven member is brought to the center or neutral position. The speed change device is of standard lathe carriage design, and the drive shaft is fitted with large size, double-row, self-aligning ball bearings. The holding device is a double quick-acting type.

Make the Flat Rate System Your System. Read article on page 17.

Durham Universal Armature Tester and Adjustable Commutator Contactor

P. J. Durham Co., 244 W. 49th St., New York City, is offering to the trade two electrical units, the Durham Universal Armature Tester and the Durham Adjustable Commutator Contactor.

The armature tester is a combination three-in-one instrument. It is a transformer or growler combined with an AC meter and contactor for measuring the induced current in each winding and a 110-volt lamp test for grounds. The price is $40 complete.

The adjustable communtator contactor, which is shown at the right of the armature tester in the accompanying illustration, can be used with any armature tester for measuring the drop in voltage between the commutator bars, or induced current in coils. It maintains a positive contact and correct position while the armature is rotated, and is designed to save time. The price is $5, meter not included.

Durham Universal Armature Tester and Adjustable Commutator Contactor

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Lenk Automatic Blow Torch

The Lenk Mfg. Co., Boston, Mass., is putting out a blow torch eliminating pumping, priming or blowing. It generates its own power. A few minutes after filling it with either denatured or commercial alcohol and lighting the wick a long blast of flame of more than 1400 deg. Fahr. is automatically produced. Size 5½ x 2 x 7/8. It is packed in individual cartons, one dozen in an effective counter display.

A 1400 Deg. Fahr. Flame Blast is Produced by This Blow Torch.

Unitron Rectifier and Portostat Discharge Test Set

The Forest Electric Co., Newark, N. J., is offering to the trade two electrical products, the Portostat, illustrated above, and the Unitron Rectifier, shown in the lower part of the illustration.

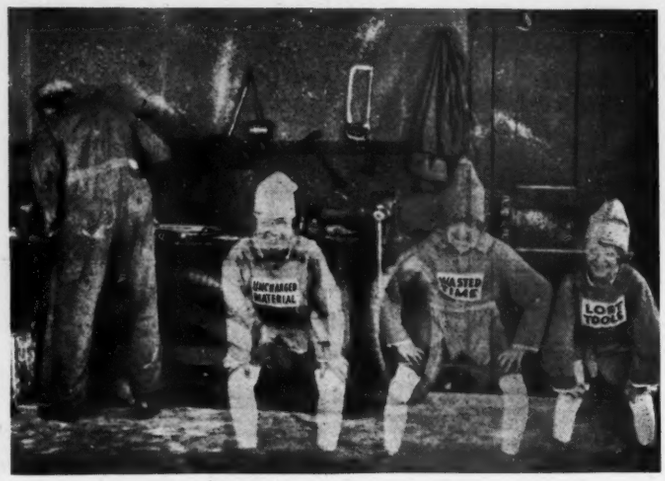
The Portostat is a carbon resistance discharge test set. Any discharge rate from one to two hundred amperes can be obtained by regulating the hand wheel. This permits making a "high rate" discharge test at momentary starting rates or the discharge of a battery at various rates. Observance of cell voltages while the battery is under discharge will immediately indicate a weak or defective cell. The price is $55. This same outfit with the exception of voltmeter and prods and with ammeter mounted in the center lists at $45.

Above: Unitron Portostat, a Carbon Resistance Discharge Set. Below: Rectifier, Easily Operated and Efficient Battery Charging Outfit.

The Unitron Rectifier is described as an economical, easily operated, efficient and trouble-proof battery charging outfit. The No. 1 model will charge one to sixteen six-volt batteries at six amperes or less. The No. 2 model is a duplex outfit, with a capacity of from either one to fifteen six-volt batteries at 12 amperes, or one to thirty at 6 amperes.

What Do You Know About Economic Haulage Costs? The article on page 19 discloses interesting comparisons.

How Tom Crawford Made Good



Two "Stills" From the Shop Profit Film

In the "Shop Profits" moving picture of the Automotive Equipment Association the troubles of Tom Crawford's business are summarized in the story of the three bad imps, who stole his money and the queen with her three good fairies who drove the imps away and came to work for Tom, helping him make good. The bad imps were "Uncharged Material," "Wasted Time" and "Lost Tools." The good queen was "Shop Profits" and her three faries were "Ask 'Em to Buy," "Ask 'Em to Pay" and "Shop System."

If any dealer or jobber desires to display this film in his territory he should inquire of the Automotive Equipment Association, 1813-18 City Hall Sq. Bldg., Chicago, Ill.

Baltimore Transit Takes Over Huge Bus Program

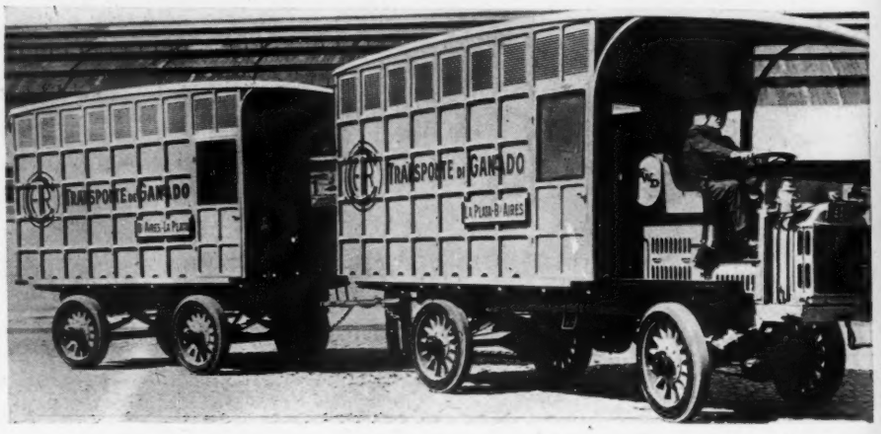
The Baltimore Transit Company has just opened two new bus lines over which twenty-six Republic Knight-motored buses of the single-deck type have begun operation. The buses will operate on a six-minute schedule except during rush hours, when a five-minute headway will be maintained.

The choice of bus equipment for these two important lines is the outgrowth of tests in which a single Republic bus of the type now in use was placed in constant operation for 7½ months. Every detail of its performance was carefully observed by officials of the company.

During the test period, the bus under observation traveled more than 35,000 miles and carried 157,143 passengers. The grand average of fuel consumption was 9 miles per gal., and the cost of repairs, including labor and material, was less than $100.

Each of the new buses has a seating capacity of 24 passengers. The seating arrangement has been carefully worked out to provide the maximum of comfort, as well as convenience in entering and leaving the bus. The driver has excellent vision in all directions, due to a specially designed windshield, and semi-circular windows in the front vestibule. For night travel, the buses are illuminated by eight dome lights.

Baltimore Enlarges Its Bus Service With Twenty-Six Single Deckers



Motor Truck Found Superior to Rail in Argentina for Transporting Race Horses

Such a motor truck transportation system has been inaugurated between the cities of Buenos Aires and La Plata, at which points very popular race courses are located. Their equipment consists of one FWD truck, and a 3-ton trailer, each of which is equipped with a body capable of accommodating two horses and one or two attendants. For distances of thirty or fifty miles, which would prove a tiresome drive for a race horse and which are hardly great enough to warrant the necessary trouble connected with the transportation of horses by freight, the motor truck is the ideal solution to the problem.

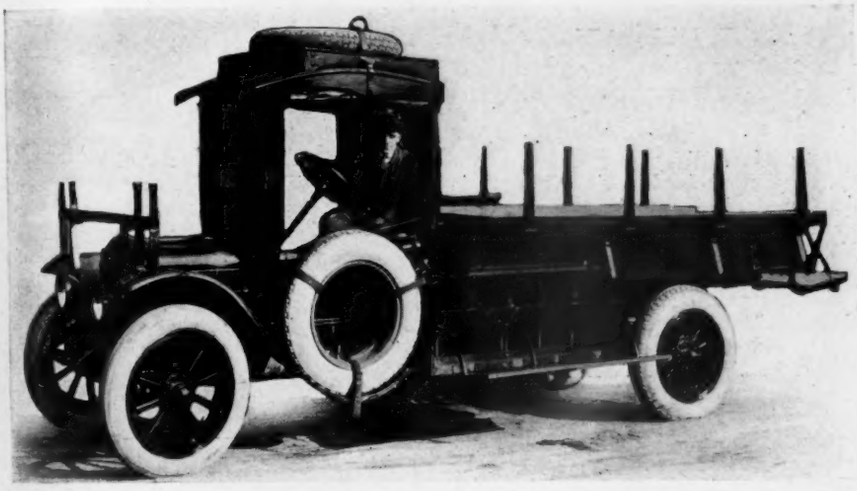
Foamite and Childs Are Consolidated

Consolidation of the Foamite Firefoam Co., with general offices at 151 Fifth Ave., New York City and O. J. Childs Co., Inc., of Utica, N. Y., has been announced. The Foamite Firefoam Co., is widely known through the work of its fire protection engineers in developing the application of the firefoam method of extinguishing fires. The O. J. Childs Corp., is the manufacturer of the well-known Childs chemical and motor fire apparatus. For several years this company has been functioning as a manufacturing division of the Firefoam Co.

The new firm will hereafter be known as the Foamite-Childs Corp. As soon as possible after August 1, the executive office will be located at Utica, N. Y.

A Window Display That Was a Prize Winner

In a recent prize contest the Michelin Tire Co., Milltown, N. J., offered prizes to the dealers of each branch territory having the most attractive window display. The window display shown above is that of the Auto Tire Co., Savannah, Ga., the prize winner of its branch territory. The display features but one of the manufacturer's products. The trimmings, placards and other decorative matter furnished by the manufacturer greatly enhanced the general simplicity of the setting by giving it an atmosphere of refinement. The display though simple was appealing.



Motor Truck Designed Especially for Construction of Oil Filling Stations

The Shell Oil Company of California is now operating a specially designed motor truck for constructing new oil filling stations. Material for the construction of filling stations was previously shipped by rail, and as the construction gang frequently had to wait days for the material to arrive much time and money was lost. Now the material is placed on this especially designed truck and delivered to the point where the new station is to be erected without any delay. The body can be used in hauling aggregate for concrete work, and can be elevated for dumping the contents. A special compartment is provided on each side of the truck for the carrying of small parts and tools. Also note how a spare is carried on a special rack on the top of the driver's cab.

Novel Advertising Truck Operated by Automobile and Engineering School

This novel advertising car is operated by the Healds Engineering & Automobile School, of San Francisco, for the purpose of advertising the school throughout the state of California. It reaches a class of people that could not be reached in any other manner. The body is of special composition material, mounted on a two-ton White chassis. It carries a moving picture outfit and is equipped with radio, the radio being used in giving radio concerts for the purpose of attracting crowds around the car. The moving pictures are thrown up against the side of any building that may be convenient. A lecturer talks of the advantages of the school, and explains the various branches taught. The truck is equipped with pullman berths so that the driver and lecturer may sleep aboard if they desire. An independent lighting system consisting of a farm lighting unit is carried on the truck which supplies current for flood lighting the sides of the truck at night. A platform for the lecturer is hinged to the rear of the truck, which, when closed up, acts as a door for the rear of the truck.

Efficiency Tests of Government Automobile Engines

After a course of experiments in the adjustment of carburetors on motor trucks used for hauling coal from the Government Fuel Yard, operated by the Bureau of Mines in Washington, D. C., made by G. W. Jones, assistant explosives chemist, a saving of 25 per cent in the consumption of gasoline was effected. Mr. Jones found nearly all of the machines using a mixture too rich in gas. Before the adjustments the exhaust gas was found to run 5.8 to 12.3 per cent carbon dioxide. All machines were adjusted to give 11 to 12 per cent carbon dioxide at a speed of about 5 m.p.h., the usual speed for the trucks. On level grades the carbon dioxide dropped about 1 per cent under that on up-grades. A fleet of 40 motor trucks is used by the Government Fuel Yard, mostly of 5 and 7½ tons capacity. Complete records of the service given by trucks are kept. The volume of gasoline consumption is considered to have been affected by three factors, 1/3 due to machine, 1/3 to the carburetor adjustment, and 1/3 attributed to the driver.

Bethlehem Develops New Dealers Contract

In line with the policy of unusual co-operation with distributors and dealers, the new Bethlehem Motors Corp., of New York, manufacturer of the new Bethlehem truck, has developed a contract with dealers which will embody, according to the company, the best features of usual truck contracts, but will be on a perpetual basis, automatically renewable year after year, so that Bethlehem dealer connections will be permanent connections of the new corporation.

The new contract provides for a stipulated number of deliveries during the first year—the number of trucks specified being on a conservative basis, in many instances only half the quantity the distributors and dealers estimate their territory will absorb. If the quota in the first year is taken, the contract continues for the second year, with an increase of 25 per cent in delivery specifications for the second year period, and a similar increase each year thereafter.

A uniform deposit policy is adhered to, and a sliding scale of discounts is used, the chassis and parts discounts depending on the size of the territory and the number of deliveries to be taken during the first year.

Under the new form of dealer relationship, there will be no renewing of contracts at stated intervals, but instead, changes that may be advisable from time to time will be made in the form of appendixes to the contract proper.

There are other features in the contract which are new and evidence the earnest policy of the new Bethlehem corporation to give their distributors and dealers the benefit of the fullest factory co-operation.

A. E. S. A. Increasing Its Membership

An increase in membership of from 62 on January 31, 1922 to 230 on July 1, 1922, is reported by the Automotive Electric Service Association, as the result of a membership drive. In securing this increase in membership, the organization has had excellent co-operation from the manufacturers of starting, lighting and ignition equipment who have come to recognize the advantages of such an association.

The midsummer meeting of the governors of the Association was held in Detroit, on August 11. Plans are now in progress for a big summer meeting at Old Orchard, Maine, August 31.

Washington Thanks Buses

Residents of Washington, D. C., are again congratulating themselves on their ability to command motor bus transportation. A heavy rain paralyzed street car service for the better part of a day recently, but the Hinkley-Engined bus of the Washington Rapid Transit Co. kept plying on schedule, and moved the crowds, thus repeating their feat during the famous snow storm of last winter, when the buses never missed a trip, though virtually the only moving vehicles in the city.

Mason Road King Now a Durant Product

W. C. Durant has entered the truck field. With the acquisition of the Mason Road King, designed and built by A. C. Mason, the Durant interest now control six distinct lines, five passenger cars and a truck.

The Mason Motor Truck Co., was organized the early part of last year at Flint, Mich., with A. C. Mason as president. Mr. Mason is an engine designer of national prominence, having to his credit the first Buick engine and the development of the Chevrolet FB and 490 engines, as well as the Samson tractor.

The plant at Flint covers 35,000 sq. ft. of floor space with 7 acres available for expansion. Production of the Mason, however, will be confined to both Flint and Bridgeport, Conn., where the newly acquired Locomobile Co. has its plant.

A one-ton model with a 4-cylinder engine developing 35.40 hp. will be the Durant product. Price of chassis is listed as $1,200 f.o.b. Flint.

Work on Ideal Highway Section Under Way

Construction work on the much talked of stretch of model highway known as the Ideal Section of the Lincoln Highway in Lake County, Indiana, is now under way after nearly two years of preliminary research.

In addition to $33,000 per mile provided by the State of Indiana, Lake County authorities have assured $25,000 from the County funds toward paying for the construction of the section. Extra expense beyond the sum supplied by the State and County, which is equivalent to what construction of the usual state specifications would cost, will be met by the Lincoln Highway Association through a special fund provided by the United States Rubber Co.

It is expected that the paving work will be completed by the end of October, many details including the lighting installation and the beautification of the right-of-way remaining for accomplishment until next spring.

"Products, Markets and Policies" Title for New B. & D. Catalog

"P. M. P." is an extremely attractive catalog issued by the Black & Decker Mfg. Co., Towson Heights, Baltimore, Md. The initials stand for "Products, Markets, Policies." The portable electric tools of the company are fully described and illustrated under "Products." There are two tables under "Markets" and an analysis of each, one table being the CHILTON AUTOMOBILE TRADE LIST for March, 1922. The Black & Decker policies are fully explained in the booklet, along with some excellent reproductions of the company's advertising copy, etc. It is a book that should be in the hands of dealers, garagemen, and equipment merchandisers.

Transport Problems Treated in Booklet

Fundamental problems involved in highway transport and highway economics are discussed at length by leading students from engineering and automotive fields in a new booklet now ready for distribution by the Highway Education Board.

Modification of truck design to fit the road, subsidizing of highway transport by the construction of market lanes, predictions of future traffic changes, and economical types of roads are only four of nearly two score problems raised and discussed authoritatively in the bulletin.

In addition a chart of the field of highway research prepared by Dr. W. K. Hatt, formerly of Purdue University, now director of highway research for the National Research Council, forms an instructive and suggestive part of the brochure.

The booklet itself is a report of a conference held on these subjects at the University of Maryland, attended by leading economists, engineers and manufacturers. It was edited by Professor C. J. Tilden, former director of the Highway Education Board, when it was known as the Highway and Highway Transport Education Committee. After a year's leave of absence he has returned to Yale University, where he is professor of engineering mechanics. The conference was presided over by President Charles S. Howe, Case School of Applied Science, Cleveland. Features of the report include a paper by Thomas H. MacDonald, chief of the U. S. Bureau of Public Roads, and an analysis of highway legislation.

The bulletin is being distributed by the Highway Education Board, Willard Building, Washington.

I. H. C. Erecting Truck Plant

Work has been begun on the new motor truck plant for the International Harvester Co., at Ft. Wayne, Ind. The plant site consists of 143 acres on the Chicago-New York mainline of the Pennsylvania Railroad. Three buildings, at present are in the course of construction which will afford 200,000 sq. ft. of floor space. Two more plants are to be added after the first three are in operation.

A $1,000,000 stock company, the Greater Fort Wayne Development Corp., has been formed by Fort Wayne citizens, with its primary purpose to provide homes for International Harvester men and their families.

Williamson is Democratic Nominee

W. A. Williamson, first vice-president and manager of the Texas Automobile Dealers' Association, has been honored by the Democratic nomination as representative from the San Antonio District, Place One. The Texas Association has been active in safe-guarding the interests of the automobile industry in Texas, Mr. Williamson taking the lead in many of the movements.

N. A. D. A. Reviews Accomplishments Under New Membership Plan

A bulletin setting forth the specific accomplishments of the National Automobile Dealers' Association since the "One of a Thousand" membership plan was installed four months ago has just been released. These accomplishments are summarized as follows:

Business Standards: For the first time in the history of the automobile industry leaders have taken a definite, united and organized stand on the ethical issues involved in the successful conduct of the motor vehicle business.

Insurance: Saved from 20 to 40 per cent of the insurance payments of the "One of a Thousand" merchants effecting an estimated saving of one half million dollars on policies written by the association's insurance carriers and on reduction in premium of policies written by carriers in an effort to hold coverage in competition with N. A. D. A. rates. Provided a uniform fire, theft and transportation policy and a uniform workman's compensation (employers' liability) public liability and property damage policy and a standard insurance service of the highest type.

Detective Bureau: Through the association's contract with William J. Burns International Detective Agency, virtually the same protective service has been provided for the "One of a Thousand" members as is given to the 26,000 banks of the United States members of the American Bankers' Association. Recoveries have been made for dealers in numerous parts of the country, consisting of collections of protested checks, "won't pay" accounts and stolen vehicles. Sums ranging from $30 to $3,000 recovered by this means.

Information: Publication and dissemination of membership bulletins containing numerous subjects of business information and service, surpassing in the opinion of numerous members, anything similar published by any source outside the dealer industry.

Taxation: In constant conference with the U. S. Bureau of Internal Revenue over details of taxation and assessment involving automobile dealers and the interpretation of automobile excises. The membership is kept constantly advised of bureau rulings affecting returns. The association also made numerous appearances at hearings designed to increase the tax burden of the industry.

Organization Help: Established a service bureau for automobile trade organization secretaries for extending the work of the N. A. D. A. down through the state and local bodies of automotive merchants so that ultimately the high standards of the N. A. D. A. will be accepted as the general practices of the whole trade. The Bureau proposes to develop and aid the state and local association secretaries to develop genuine constructive service organizations in each state so that state and local legislative, taxing, traffic problems and the like can be handled with the same clarity as national problems are handled by representative dealers through committee in the N. A. D. A.

Exposing Fakes: Exposed a fake motion picture promotion which was preying off automobile dealers. Demanded and received from a nationally advertising manufacturer co-operation in the writing of copy for that concerns advertising that would not cast reflections upon the motor vehicle industry. We regarded copy as thoughtlessly injurious to our industry.

Gasoline Inquiry: Began agitation which has brought on present Senatorial investigation into the price of gasoline; laid information on price conditions before Federal Trade Commission and Senators LaFollette of Wisconsin and McKellar of Tennessee urging Congressional action to protect motorists against arbitrary increases in cost of motor fuel. Association will continue this activity until facts have been shown to motoring public that power lies in their hands to remedy situation by backing our stand up in Congress.

Highway Committee Changes Their Name

For the sake of simplicity and euphony, members of the Highway and Highway Transport Education Committee have voted by referendum to change its name to the Highway Education Board, it was announced.

Although correctly understood among technical men, the name of the committee, popularized by various educational movements among schools and colleges, proved confusing and cumbersome, and the title, Highway Education Board, was chosen as the simplest that would express the purpose of the organization.

Sacramento Suburbanites Require Motors

Over 1000 suburban homes near Sacramento, Cal., are dependent chiefly on the motor car for transportation, according to the real estate board of that city.

New Truck Manufacturer in Grand Rapids

Two models, a maximum 2000 lb., and a 3500 lb. truck, are to be brought out immediately by the United Motor Products Co., Grand Rapids, Mich., which firm was recently incorporated under the laws of Delaware.

According to the company, the models are to be composed of well known units, attractive in appearance and low priced. Sample trucks are to be ready within the next month.

Officers of the company are F. T. Hulswit, now president of the United Light and Railway Co., who will be the president; Harry Green, vice-president in charge of finance; G. R. Wilber, vice-president in charge of operations; A. J. Boone, production manager in charge of engineering and manufacturing.

G. R. Wilber was with the Federal Motor Truck Co., for three years, the United for one year, and with F. W. Ruggles at the Republic Motor Truck Co., and the Ruggles Motor Truck Co., for eight years. Mr. Boone was formerly chief engineer for the Ruggles Motor Truck Co.

U. S. Light and Heat Has California Branch

The U. S. Light & Heat Corp., of California, has been organized and incorporated as a subsidiary of the U. S. Light & Heat Corp., of Niagara Falls, N. Y., manufacturer of USL storage batteries, railroad car lighting devices and electric arc welders. A site has been leased and construction started on a new plant in Oakland, Cal. The purpose of this new plant is to enable the U. S. Light & Heat Corp. to handle more efficiently its growing volume of business on the Pacific Coast. It is anticipated that production will start in the new factory about October 1st.

3500-Mile Trip in Bungalow Truck

Mr. and Mrs. John Donahue, of Spokane, made the trip covering four months, from Spokane snows to California beaches and home again in time for Spring. Mr. Donahue took a one-ton Transport used in his transfer business and equipped it with a bungalow body at $200 expense. The truck home was equipped with beds, stove, clothes and food closets and electric lights. As every comfort was provided, the traveling bungalow was used for quarters wherever they went.

Personal Items

Robert W. Appleton, production engineer of the Pierce-Arrow Motor Car Co., of Buffalo, N. Y., has been appointed manager of purchases of the company. Mr. Appleton will also continue as production engineer. He has been with the company for more than 20 years.

Thomas B. Blakiston, formerly assistant general sales manager has been made general sales manager of the American Hammered Piston Ring Co., Baltimore, Md.

Tom Cathcart, in charge of the advertising department of the Packard Motor Car Co., has resigned to accept a position as manager of the promotion department of the Crowell Publishing Co. His headquarters will be in New York City.

E. G. Christensen has resigned as vice-president of the Ryan Sales Engineering Co., of Detroit, and has accepted the position of sales manager of the Carl Pick Co., of West Bend, Wis., manufacturers of universal joints and propeller shafts.

George T. Christopher has been announced as general superintendent of the plant of the Dayton Engineering Laboratories Co., Dayton, O. His promotion comes as recognition of his excellent services in managing the manufacturing division.

B. M. Hall, wholesale manager for the Packard Motor Car Co., of Missouri, at St. Louis, has been appointed truck sales manager for that company. He succeeds C. A. Bothell, who has resigned to act as eastern distributor for the Home Appliance Corp., of St. Louis.

Glen Harkrader, formerly sales manager of the No-Leak-O Piston Ring Co., has been appointed territorial representative of the Indiana Piston Ring Co., of Hagerstown, Ind. in the territory west of the Mississippi and in Minnesota, Wisconsin, and Illinois. He will be assisted by his brother Wallace Harkrader. General sales offices will be maintained by them in Chicago and San Francisco.

E. M. Lubeck, who gained considerable prominence during the War by his work with the Motor Transport Corps, has been announced as general sales manager of the Apperson Bros. Automobile Co., of Kokomo, Ind.

Paul L. Odle, formerly with the Republic Motor Truck Co., and the Denby Motor Truck Co., has been appointed sales manager of the Truck Division of the Fremont Consolidated Motors Corp., manufacturer of the All-American trucks, at Fremont, O.

Frank H. Pietsch has been elected general manager and vice-president of the Kelly-Springfield Motor Truck Co., to succeed E. O. McDonald, whose resignation was recently announced. Mr. Pietsch came to the truck company several months ago.

William A. Schuyler has resigned his position as general manager of the Scintilla Magneto Co., of New York City. He is to be succeeded by Lawrence R. Wilder, of Cleveland.

George D. Shanahan has been appointed general manager of the J. W. Murray Manufacturing Co., of Detroit. Mr. Shanahan has been with the company since its inception.

F. W. Warrington has been made general manager of branches of the Republic Truck Sales Corp., Alma, Mich. Mr. Warrington was at one time with the Denby Motor Truck Co., and later with the Defiance Motor Truck Co.

Phil E. Zimmerman has succeeded A. L. Oliger, who recently resigned as secretary and treasurer of the Automobile Trade Association of Kansas. Mr. Zimmerman was at one time active in the affairs of the Hagstrom Corp., spark plug manufacturers.

New Incorporations

Lyons Roller Bearing Co., has been incorporated at Dover, Del. to manufacture roller bearings. The capitalization is $500,000.

The Clinton Tire & Rubber Co., of Dover, Del., has been incorporated to manufacture tires, etc., at a capitalization of $100,000.

The Midwest Engine Corp. has been granted articles of incorporation at Wilmington, Del., to manufacture engines, boilers, etc. Capitalization is $17,500,000.

The Sandow Motor Truck Co., manufacturers of trucks and taxicabs, is reorganized and has moved to Chicago Heights, Ill.

Factory News

The Fisk Rubber Co. has just issued its semi-annual report for the first six months of 1922, showing net profits of $1,774,024. The balance of the surplus account now stands $2,984,608.

The Ford Motor Co. reports production for June the highest in its history; 148,439 passenger cars, trucks and tractors. Truck sales show an increase of 84 per cent over last year.

The Grand Rapids Tire & Rubber Corp., Grand Rapids, Mich., is planning a complete new unit to the Corduroy Cord factory, to cost about $250,000. Work on the addition is to begin at once.

Removals and Trade Changes

The Biggam Trailer Co., which was organized a year ago to manufacture trailers at Milwaukee has been forced to obtain larger quarters at Racine, Wis. Full production has now begun at the new location.

The C. R. Wilson Body Co., of Detroit announces the construction of a new six-story building to take care of the increasing demand of Wilson cabs. The building is 400 x 122 ft., and is of steel and concrete construction. It will be ready for occupancy by September 1st.

The Witherbee Storage Battery Co., Inc., is now located in its general offices and sales and service station at 234 West 55th St., New York City. The manufacturing plant of the company was recently located at Belleville, N. J., the former facilities for manufacturing having been greatly outgrown.

Van Dresser Brothers, 1157 Concord Ave., Detroit, announces that its contract with the International Purchasing & Engineering Co. has expired and that in the future sales and distribution of the Van Dresser cylinder reboring tools will be handled by the manufacturer.

The Johnson Brothers Tire & Service Co., 3104 Locust St., St. Louis, has been appointed authorized sales and service station for Firestone solid and giant pneumatic truck tires.

The Standard Auto Equipment Co., of Buffalo, N. Y., is now located at 1454 Main. Several new lines of well-known equipment have been added to the company's stock.

The Mason Tire & Rubber Co., Kent, O., has installed a new branch office and warehouse in Pittsburgh, located at 6305 Penn Ave., to serve the territory of the Western half of Pennsylvania and the northern half of West Virginia. R. W. Mason will be manager.

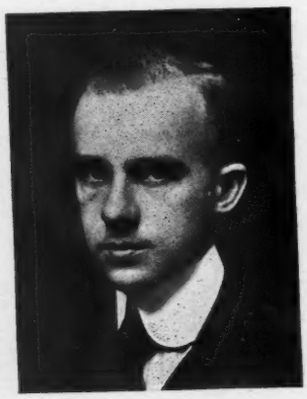
The Western Auto Supply Co., with headquarters in Kansas City, has opened a branch store at 923 Locust St., Des Moines, Iowa. Charles J. Batterson, who has been with the parent company for ten years, will be the local manager.

The B. G. Corporation announces that owing to the fact that the demand for "B. G." spark plugs has greatly increased, the firm will move to larger factory and office quarters at 136 West 52nd St., New York City.

The Reliable Tire Co., Cupple tire distributors, at 3121 Locust St., St. Louis, is now utilizing a service lot 50 x 150 ft., to do its tire and tube changing, etc.

Walter P. Coghlan

Recently of the American Hammered Piston Ring Co., who has become vice-president and director of sales of the Trexler Co., Philadelphia, Pa.



Rolfe C. Spinning

Who has resigned as advertising manager of the Service Motor Truck Co., to become manager of the Detroit office of the Service Corp., Troy, N. Y.

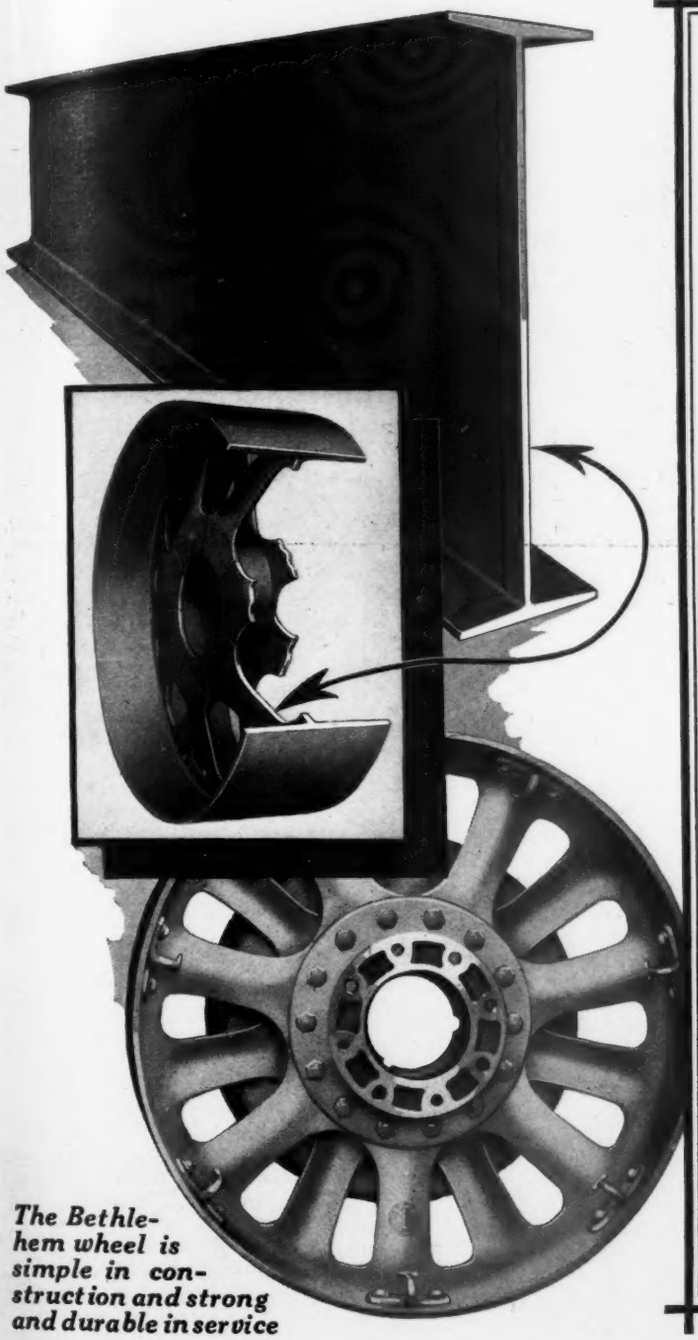
R. J. Goldie

The new general manager of the Ruggles Motor Truck Co., Saginaw, Mich. For six years he has been factory manager of the Columbia Axle Co. F. H. Ragan will be Mr. Goldie's successor.

G. R. Wilber

Vice-president of the newly organized United Motor Products Co., of Grand Rapids, Mich., which is soon to go into production on a 2 ton and 3½ ton truck.

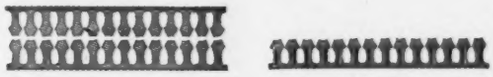
How This Wheel is Built From a Rolled Steel I-Beam



The Bethlehem wheel is simple in construction and strong and durable in service

The Process, Step by Step

The Bethlehem Rolled Steel Truck Wheel marks a new departure in methods of wheel construction. It is made from a rolled steel I-beam by an astonishing yet simple process, resulting in a wheel that combines tremendous strength with light weight. The chief steps in its construction are described below:



First, the spokes are outlined and the beam divided, by punching, into two identical halves, each of which makes one wheel.

The spokes are grooved and staggered, and huge presses bend the ends of the beam through an angle of 90°. The hub spacer is inserted.

The beam is bent in the shape of a complete wheel structure; the ends of the felloe are welded together electrically; the wheel is finished and painted.

This process is covered in detail, with numerous illustrations, in Catalog RC. Send for a copy.

BETHLEHEM STEEL COMPANY
BETHLEHEM, PA.

New York Boston Philadelphia Baltimore Washington Atlanta	*Sales Offices:*	Pittsburgh Cleveland Detroit Chicago St. Louis San Francisco

BETHLEHEM
ROLLED STEEL TRUCK WHEELS

THIS SYMBOL IN ANY ADVERTISEMENT MEANS: SEE "CHILTON AUTOMOBILE DIRECTORY" FOR COMPLETE BUYING INFORMATION

Report on the Pirate Parts Situation*

Make Parts Prices Right, Distribution Right, Discounts Right and Then Educate the Dealer, the Owner, Independent Repairmen and the Public in General

O. C. HUTCHINSON (Dodge), chairman of a special committee to investigate the Pirate Parts Situation read the following report at the members' meeting of the Automobile Chamber of Commerce, recently.

Pirate parts as here discussed will include not only such as are so defined by law, that is, those which infringe patents or are misrepresented as the genuine, but all those substitute or replacement parts that are not like the original used by the manufacturer or authorized by him. A better name would be unauthorized parts. These may be divided into three classes: I, Strictly Pirate Parts; II, Low-Grade Unauthorized Parts; III, High-Grade Unauthorized Parts.

Competition from unauthorized parts of all kinds is a disadvantage to the industry, but, only when it is also a disadvantage to the user, can we reasonably expect sympathy and co-operation from the trade and public in antagonizing such traffic. All Class I and II parts, it can be shown, are against the car owner's best interest, so that educating the public to this fact will accomplish much.

Further the unfair competition of Class I (pirate) parts can be restrained by law. This class, however, does not present the most serious menace nor does it represent the largest volume.

The unauthorized parts that are not pirates, Classes II and III, are the hardest to contend against because trade in them is not illegal; it is more difficult to show the public the disadvantage of using them, and our own dealers are the worst offenders in buying them. It is this competition that needs the manufacturers closest study.

Dealers claim they would not use Class II parts—those that are inferior yet not pirates—if manufacturers priced parts right and had adequate distribution. It is largely a matter of educating the dealer to the importance of co-operation with the factory for his own protection. Many factories have used bulletins and letters to their dealers to explain to them the importance of adhering to the use of those parts that the factory has found to give the best service in their particular product and to warn owners against the use, or allowance of the use of any but original parts, because of its invalidating the guarantee.

Where the Keen Competition Enters

Class III parts include those that are equal or superior to the original. If, in addition, the latter are sold for less than the genuine, the car owner is bound to consider it to his advantage to use them, and it would seem to be the car manufacturer's place to strive to learn how to equal their quality and meet their price. When it is to the public's interest to use such parts, it is almost fruitless for manufacturers to put forth effort and advertising expense against them, or to dissuade dealers and owners from using them.

The strongest competition comes from such of Class III parts as may be regarded as equal to the original but cheaper in price. The producer generally has less overhead because he concentrates on parts that are most in demand, whereas the car manufacturer has to carry all parts that may be wanted and so, having many slow-moving parts, has a larger overhead. It is this competition that is hardest to meet.

There may be some parts that could be priced closer if the manufacturer realized the importance of studying ways to reduce the cost so that this outside competition might not get a chance to start.

The Market for Unauthorized Parts

The independent repair shops and garages afford the greatest market for unauthorized parts. If a more attractive price is offered than can be obtained by buying from the factory's distributor or dealer, naturally the repair man turns to the cheapest source, feeling less concern about the reputation of the car than the authorized dealer or the factory. To meet this situation there have been very earnest representations from individuals and organizations that it is highly important for the factories to enable dealers to give material discounts on parts to independent repair men.

Independent Repairmen Want Repair Parts Discounts

Among the most recent of the latter was a resolution passed by the Los Angeles Trade Association and transmitted to the Chamber by the California Automobile Trade Association, declaring that most automobile manufacturers allow so little discount on repair parts that local distributors and dealers cannot give a discount to legitimate repair men, driving the repair men to purchase imitation or pirate parts to the ultimate harm of the motor vehicle manufacturers. In his letter accompanying the resolution, Secretary Robert W. Martland, gave it as his opinion, that, "unless a discount on standard manufactured parts is given to legitimate repair men, the pirate companies will control the situation in California."

About the same time the Intermountain Automotive Trade Association of Denver circularized the manufacturers, declaring that the only way to eliminate the pirate parts evil is for them to allow a greater discount to distributors so that they in turn can give independent repair shops a fair discount.

Some doubt the efficacy of this as a remedy, believing that instead it will aggravate the disease. Assuming that the manufacturer has priced his parts as low as possible in the beginning, he must raise his prices in order to give the distributor a larger discount, which will have the effect of increasing the cost of parts to the car owners, tending to drive them to the pirate parts market.

Remedies for Pirate Parts Evil Summarized

When the manufacturer has made his parts prices right, distribution right and his discounts right, the rest of the job is education. This must reach the dealer, the owner and the independent repair men, or the public in general, and cover why the manufacturer knows best what parts should go into his car or truck, why he should be able to turn out the best in quality for a given price and why the use of an inferior part may be dangerous or at best expensive and uneconomical.

Our attorney, Charles Thaddeus Terry, says, protection is only possible if our manufacturers plainly mark every part likely to be pirated with a copyrighted identifying mark and warn against the use of all others.

*Reproduced from the "Service Bulletin," published by the National Automobile Chamber of Commerce.

Fritz Resigns From Research Club

George Fritz, who has been general manager of the Research Club for a year and a half, has resigned, his action to take effect August 1. Fritz has not announced his future plans and no successor has yet been chosen by the club. Robert Weinstock, of the Weinstock-Nichols Co., San Francisco, is president.

The Research Club is an organization of 18 jobbing houses in non-competing territories, which was formed in June, 1920, the idea being adapted from the drygoods trade. Its first activities had to do with business research along efficiency lines, but later it added co-operative buying. The club maintains headquarters in the State-Lake building, Chicago.

Baltimore Has New Bus Fleet

A fleet of 27 Republic Knight-engined buses have been bought by the United Railway & Electric Co., to be put into operation on the streets of Baltimore, Md. The buses seat each 24 passengers and will be utilized as feeders and connectors to the street railway lines.